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DOMESTIC BREEDS OF SHEEP IN AMERICA.

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INTRODUCTION.

All the domestic sheep in America have originated from importations, most of which have been made from European countries since the beginning of the nineteenth century. These breeds have not yet been able to find themselves fully, and there are not the clearly defined areas devoted to certain classes such as are common in England; still there is a gradual tendency toward segregation.

The fine wools are grazing upon the western ranges and to a lesser extent through the Ohio fine-wool region. They are undergoing some changes to improve the carcass and increase the length of wool; some foreign blood is being used to do it; nevertheless these sections may still be regarded as being fine wool in character.

In Tennessee, Virginia, and Kentucky, the spring-lamb region of America, the Southdown lambs are very popular. To a lesser extent some of the other mutton breeds are gradually gaining precedence.

Through the central farming section of the country the medium-wool breeds have taken possession, the long wools largely yielding for a location more favorable to them in the North and Northwest, notably Canada, Utah, Idaho, Montana, and Oregon.

It is not always possible to say that there is one best breed for any section. There may be two or three that would do equally as well, but it is undeniable that some breeds are far more suitable than others for a given location. All the breeds have their good qualities and most of them, if properly handled, will give good results in some section of America. The problem is to get the ones best adapted to particular conditions. Some breeds have a larger number of high-class individuals than others, but a truly successful breeder can improve any of them.

Note.—This bulletin gives detailed information as to the origin, adaptability, distribution, distinguishing characteristics, etc., of the various domestic breeds of sheep. It is of especial interest to sheep breeders and to the sheep grower who is desirous of securing the best breed adapted to his particular locality.

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As a rule, but one breed should be selected. Where there is more than one breed upon a farm it is a difficult matter to keep the gates all closed at the proper time and prevent crossing. If several farms are available more breeds can be handled, but the difficulties in management are much increased. The most successful sheep breeders in America handle but one breed. The fact that there are more breeds than in any other class of farm animals may in itself make the selection of one breed rather difficult. Some of the deciding factors should be climatic conditions, feeds available, elevations, what particular line of the industry is to be followed, and popularity of the breed.

The effect of climate is strikingly illustrated in the evolution of the sheep industry of the extreme Northwest. The Willamette Valley in Oregon, now so famous for its long wools, was once partly occupied by fine-wool sheep. The large amount of rainfall, which comes in a long-continued drizzle, caused the hay and weed seeds that became lodged in the wool to grow and become green upon the sheep's back. The Merino breeds were decidedly out of place there. After a time the Lincoln and other long-wool breeds were introduced and the industry assumed a different aspect. Their long locks act as a thatch, carrying the water off, and these breeds thrive as they do in few other places except their native counties in England.

The kind of feed produced is of importance. The larger breeds have developed upon land that has produced abundantly. They are capable of taking care of a larger amount of feed, such as the moist fertile lowlands produce, while the smaller breeds succeed better upon the less abundant fare of drier and less fertile pastures. There is evidently some connection between the general higher quality of the smaller breeds and the scanty, more nutritious feeds that they receive under natural conditions. If they are removed to the lowland they lose much of their characteristic type and quality.

The effect of elevation upon a breed is also apparent, but how much of this effect is due to the amounts and kinds of feed it is difficult to determine. Certain it is that the mountain breeds are smaller, more active, more hardy, and better able to care for themselves than their down or lowland neighbors.

The importance of hardiness in the mountain breeds was shown during the last century along the Scottish border. The Cheviot had for a number of years been displacing the Black-faced Highland breed because of its finer quality of wool and somewhat better carcass. A number of severe winters worked havoc among the flocks of the former breed by causing a very heavy lamb loss, and the Highland breed, because of its hardiness, came back into its own.

The effect of the soil upon sheep is somewhat obscured in the effects of feed, elevation, etc. That there is some effect can not be denied, but the extent of this is an unsolved problem.

Whether the breeder expects to specialize upon some particular line of sheep farming should likewise be instrumental in making a decision. If winter lambs are to be produced a breed must be secured that will breed at the right season of the year, and not all will do this. The Dorset, Merino, and Tunis have given the best satisfaction thus far.

The popularity of a breed will often have its effect in influencing one's decision. Some breeds have been developed under conditions that are more general, or else they have a wider range of adaptability than others. The popularity of several breeds in this country is due to this fact. No better illustrations of these can be mentioned than the Merinos and Shropshires that are found from Maine to California. Some of the minor breeds need men who will place them before the public, as there can be no doubt as to the effect of a wide-awake breed association in advancing a breed.

It is well before making a selection to consider carefully the most popular breed in your community. There is usually some good reason for it being popular, but occasionally because of fashion a breed will enjoy a "boom" that it does not rightly deserve. In some States at the present time there are colonies of breeders handling certain breeds, and buyers are attracted there because there are excellent opportunities for selection in the neighborhood. There are also advantages connected with buying stock near home. The keen competition offered by some of the classes in the show ring has been a lure that has caused some men to take up a certain breed. Others have been content to win more often in the smaller classes where the winnings are easier.

Some breeds are regarded as needing more care than others; at any rate they become more unsightly if denied this attention. However, no flock will thrive upon mismanagement. Good appearance is always desirable, and sometimes it is of prime importance. The use of sheep for keeping the lawns of parks and country places in trim has been in effect in this country for years and here attractiveness is indispensable. The Southdown has proven very popular for this purpose.

The cost of foundation stock will undoubtedly have considerable influence with some people in making a selection. However, too much importance should not be attached to this. Often breeding stock of some breed unadapted to your locality can be bought very reasonably, but if the flock was established there would be little demand for its products and the venture would be likely to meet with failure.

The characteristics of the breeds as regards the color of the face and legs and whether or not they are horned have been regarded as of considerable weight, but it is doubtful whether these are as important as is sometimes inferred.

It is the purpose of this bulletin to point out the main characteristics of each breed. Some of the early history given may therefore seem irrelevant, but it is of importance. The age of a breed is largely indicative of the degree of fixity of type. A knowledge of the foundation stock is important, as it reveals latent characters that might crop out and that should be guarded against by the breeder, and so on. While it is the object to point out the importance of selection, it is not intended to minimize the necessity for proper care and management. Too many purebred flocks of high character have been established in this country only to go to ruin on account of poor care. This side of flock husbandry has been treated in Bulletin No. 20 of the Agricultural Department series.

CLASSIFICATION OF THE BREEDS.

There are probably nearly as many classifications of the breeds of sheep as there are breeds. Almost every prominent author of literature in the ovine world has expressed views upon the subject. They have approached the task from almost every possible angle; consequently we have classifications based upon the color of the face, including the light and dark faced sheep, upon the presence or absence of horns, and upon the topographical origin of the breed, such as the mountain, upland, and lowland breeds. There are other classifications based upon the geographical origin of the breeds; for instance, the British, Island, and foreign breeds; upon anatomical structure, the fat tails and the broad tails, and so on. It is hardly necessary to say that any classification must be more or less arbitrary, as the different divisions grade almost imperceptibly into one another.

The most important classifications are those based upon the wool, of which there are several. Some of these are based upon the length, but as this property is more dependent upon the circumstances under which the sheep are kept than is the degree of fineness, we will base our classification upon the latter quality.

FINE WOOLS.

American A, B, and C type Merinos.		Rambouillets.

MEDIUM WOOLS.

Southdown.	Suffolk.	Lonk.
Shropshire.	Cheviot.	Ryeland.
Hampshire.	Welsh Mountain.	Kerry Hill.
Oxford.	Tunis.	
Dorset Horn.	Exmoor Horn.	

COARSE WOOL.

Leicester.	Romney Marsh.	Black faced Highland.
Cotswold.	Wensleydale.	Karakule.
Lincoln.	Dartmoor.	Persian.

WOOLLESS.

Barbados.	Barbary.

Deciding the order in which to take up the breeds of the different classes is not so easy as it seems upon first thought. The importance

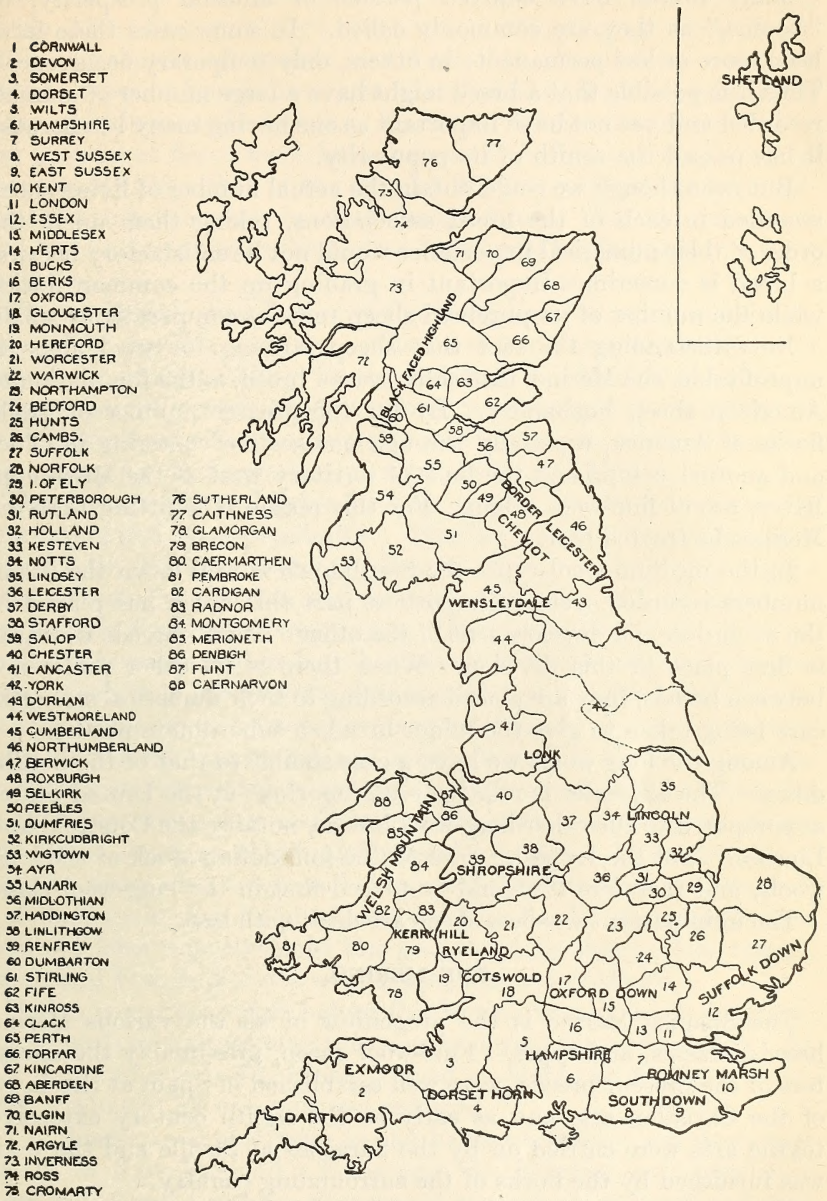


FIG. 1.—Map showing place of origin of the breeds of sheep of Great Britain that have been imported into the United States.

of the breed is indicated, but not necessarily decided, by the number of purebred animals recorded. The records usually extend over a number of years and few of the sheep that have died have been noted

in the records. Hence it is difficult to tell the actual number of living animals.

Many breeds have enjoyed periods of unusual prosperity, or "booms," as they are commonly called. In some cases these have been more or less permanent; in others, only temporary occurrences. Thus it is possible that a breed might have a large number of animals recorded and yet not be so important as one having many less because it has passed the zenith of its popularity.

But even though we could obtain the actual number of living sheep recorded in each of the breed associations, taking them up in the order of their numerical importance would not be satisfactory because a breed is sometimes important in grading up the common flocks, while the number of its purebred sheep remains comparatively small.

Notwithstanding the fact that sheep farming for wool alone is unprofitable, the Merino, distinctly a wool breed, is the foundation of American sheep husbandry. By far the greater number of grade flocks of America, especially through one section centering in Ohio, and another comprising the bulk of territory west of the Mississippi River, are of fine-wool origin. For this reason it is fitting that the Merinos be treated first.

In the medium-wool types the Southdown is well down the list in numbers recorded, yet the important part this breed has played in the evolution and development of the other "down" breeds warrants it first place in this division. When there is no other preference between breeds, they are placed according to their numerical strength, care being taken to give the minor breeds a subordinate position.

Among the long wools we have a case similar to that of the Southdown. The Leicester is relatively unimportant in the United States as compared to the other long-wool breeds, notably the Cotswold and Lincoln. Yet the Leicester entered the foundation stock of the long wools, and therefore it should be placed first in the long-wool class.

The unimportant woolless sheep are dealt with last.

THE MERINO.

The Spanish Merino is the progenitor of all the various Merino breeds, classes, and types. Fine-wool sheep, presumably the ancestors of the present breeds, were well established in Spain at the dawn of the Christian era, and as early as the eighth century extensive textile arts were carried on by the Saracens at Seville and the wool was furnished by the flocks of the surrounding country.

There were two great groups of Spanish Merinos, known as the Estantes, or Stationary, and the Transhumantes, or Migratory. The latter group was considered much superior. These groups were further divided into a number of more or less important families. Little improvement took place in this breed in Spain, especially with regards

to mutton qualities, which were very inferior, but the wool of these sheep has been noted for its fineness for centuries.

Merinos were introduced into Sweden about 1723; Saxony, 1765; Silesia, 1768; France, 1783; United States, 1793; Cape of Good Hope, 1797, and shortly afterwards into Australia. In all these countries distinct types or breeds have arisen, and marked improvements have taken place in many instances. In France the size, mutton qualities, and amount of fleece have been increased; in Saxony the fiber is of finer quality than that of the Spanish Merino; and similar improvements have taken place in other foreign lands. The improvements that have taken place in the United States will be discussed in a later paragraph.

The world-wide distribution of the Merino can be accounted for by some of its peculiar qualities. The most important of these are its wide range of adaptability, its marked degree of hardiness (contrary to its apparently weak conformation), its inherent characteristic of producing a heavy fleece of superior quality, and its habit of grazing, these sheep banding together in large herds while feeding.

The history of the Merino in this country has been marked by alternating periods of popularity. The first importation was brought over by Mr. William Foster, of Boston, Mass., in 1793. The shipment consisted of one ram and two ewes, and they were presented to Mr. Andrew Craigue, of Cambridge. The latter gentleman failed to realize their value, and he had them slaughtered for mutton purposes. Later, when he paid $1,000 for a single ram, he recognized his mistake. In 1801 other small importations came over, and the Merinos gradually increased in popularity and numbers until 1810, when the fine-wool craze started and they were literally imported by the thousands. In that year alone it is said that 10,000 were brought over. Ewes sold for as much as $1,000 and rams for $1,500. After the war of 1812 the boom died down, and sheep that formerly sold for hundreds of dollars could now be purchased for $1 a head. Spanish Merinos have not been imported into this country since that period, though Saxon and French Merinos were subsequently introduced.

Half a century elapsed before the Merino was again in its glory. The second craze swept over the country during the early sixties. At this time rams were frequently valued as highly as $2,500, and an offer of $10,000 for one ram was reported.

The American type known as the Vermont Merino was developed mainly in New England. It became the heaviest wool-producing sheep in the world and the fiber was of exceptional strength and fineness. These sheep are distinctive in having heavy folds over the body, with the exception of on the back, these folds giving a larger surface for the production of wool. The wool extends over the head in a compact cap, often obscuring the eyes. Only the ears, the lower

part of the nose, and the muzzle are woolless, and these are covered with white, silky hair. The wool also extends down the legs to the hoofs. A large amount of yolk or oil is desired, as this is regarded essential to the production of the best quality of fiber, but in a great many cases it has been overdone. The skin is a beautiful shade of pink, the ideal color. The form is rather inferior; the neck is long, shoulders sloping, and the chest is narrow. The withers are thin, the spring of ribs only moderate, consequently the back is rather narrow. Behind, they lack development in the leg of mutton, being more or less "cat-hammed." This type became famous not only in the United States, but in foreign countries as well, and rams were shipped to Australia, South America, and South Africa. Many of the Vermont flocks have been disbanded, but shipments of Merinos are still made frequently from this State both to South Africa and South America. Some prominent men in early American Merino history were Stephen Atwood, of Woodbury, Conn.; Edwin Hammond, of Middlebury, Vt.; and William Jarvis, of Weathersfield, Vt. Robert Livingston also did a great deal in establishing the breed.

The Delaine Merino was developed through Ohio and Pennsylvania and to a lesser extent in Michigan and West Virginia. This type differs from the Vermont Merino in having a smoother body with few or no folds. They possess more size and fatten more readily than the type of American Merino mentioned above. The fiber is considerably longer and usually grades as a combing wool. It does not contain as much yolk as that of the American Merino. The Delaine breeders have endeavored to combine mutton qualities with wool, and their success is attested by the present popularity of this type

There are several different families of Delaines. The most important of these are the Dickinson, the National, the Victor Beall, the Black Top, and the Improved Black Top.

Merinos in America are to-day divided into three classes, based upon the folds in their skin, fineness of fiber, their mutton qualities, etc., and are registered under these types. At the Columbian Exposition and again at the Louisiana Purchase Exposition in 1904, they were divided into two classes, A and B. Class C has since been added

It must be admitted that there has been considerable confusion due to this classification. The fairs are not uniform in their specifications as to what comprises the different divisions, the judges are not all of the same opinion, and it is evident that the exhibitors have not the classification as clearly in mind as they should, since lightly folded A class sheep are sometimes shown with the B classes and heavily folded B's occasionally compete with A class sheep for honors. Another confusing condition is that the different classes do not breed true to type. A B-type ram may sire C-class lambs, or vice versa. Again the number of folds decreases with age, and a lamb that prop-

erly shows in the A class may belong to class B when it is a yearling or an aged sheep. The following paragraphs give the general idea of the different classes.

The A-type Merino is characterized by heavy folds or wrinkles upon the neck, breast, middle, and quarters and a complete covering of wool over the body and legs. The Vermont Merinos would usually fall into this class. Mature rams in breeding condition should weigh about 140 pounds and ewes about 100 pounds. Rams should shear close to 30 pounds of wool for one year's growth and ewes about 20 pounds. The fleece should be very dense, and the length of the fiber should be about 2½ inches for one year's growth. The fiber should also be very fine, "crimpy," soft, and pliable. The yolk should be of a creamy color. It constitutes about 70 per cent of the fleece. Wool from this type grades as fine clothing or combing.

B-type Merinos should have folds upon the neck, breast, flank, and about the tail head. The covering of wool over the body and legs is not quite equal to that of the A type. Mature rams in breeding condition should weigh from 150 to 175 pounds and ewes from 100 to 115 pounds. Good rams shear in the neighborhood of 25 pounds and ewes about 15 pounds. The fleece is generally less dense than that of the A type. The fiber should be crimpy, soft, and pliable. It should measure from 2½ to 3 inches in length. The yolk is preferably of a creamy color and comprises about 65 per cent of the weight of the fleece. The wool grades as fine clothing or delaine.

C-type Merinos should be perfectly plain or free from folds, unless to a very slight extent in the neck or breast. The Delaine represents this type. The head, legs, and body are not so well covered. Rams in good breeding condition should weigh about 175 pounds and ewes 125. A ram's fleece (12 months' growth) should weigh approximately 18 pounds and that of the ewes 11 pounds. The fleece is much less dense, containing about 20,000 fibers per square inch. The fiber is less crimpy and longer, measuring from 3 to 4 inches. The yolk is white in color and should comprise about 55 per cent of the fleece. The wool from this type grades as fine delaine or staple.

In most flocks of any material size all three classes or types are present, and these are crossed at the discretion of the breeder. For instance, if the ewes approach too closely to the angular A type, and their mutton qualities become markedly inferior, a ram is crossed upon them, of perhaps the C type, to remedy this and bring about a balance. If the opposite condition prevails, which is more often the case, an A-type ram might be used to improve the fleece. Some authorities hold that this is the sole purpose of the A type and that it is necessary to maintain a heavy fleece.

Despite the fact that the Merino has long since passed the height of its popularity, the Merino blood is more prevalent in America to-day

than that of any other breed. They have two principal strongholds in this country. The first and most important is the range country west of the Mississippi, and the second is the fine-wool section of Ohio, which also embraces parts of Pennsylvania, West Virginia, and Michigan.

On the range a hardy sheep that will withstand seasons of drought and scanty food, that will band together in large flocks while feeding, and that will produce a good fleece is desired. The Merino fills these requirements. But it is also desirable to raise a crop of mutton lambs on the range. The Merino is distinctly inferior for this purpose, and as it seems to be difficult to secure a mutton breed that will suit range conditions in itself, the alternative has been taken of using ewes of Merino foundation and crossing a mutton ram upon them. The Delaine-type ewe has been especially popular for this purpose.

In the fine-wool section of Ohio there are many purebred flocks of considerable size and note, and a large majority of the farmers' flocks are grade or purebred Merino. Much Vermont stock was taken to Ohio. The strongest fine wool of the world is produced in this region. The establishment of the Merino in this section has been to some extent due to the demand for breeding stock through the West. Now that the demand has decreased because of the reduction of the range and because of the Western States producing most of their own breeding stock, it seems possible that the Merino will remain and a type be developed that will more nearly fulfill the mutton requirements of the markets as they exist to-day. Of late years Merino ewes have been used for the production of "hothouse lambs."

The Merino breed has been hampered with a superabundance of record associations. Some of these have been founded upon certain strains of the breed, only sheep descended from these strains being eligible for registry. The confusion caused by crossing A, B, and C types and by the existence of numerous record associations is without a parallel in American live-stock history. The number of societies at the present time is not so great as formerly, as some of these have combined and others have dropped out of existence. The American & Delaine Merino Record Association, Delaware, Ohio; the Standard Delaine Merino Sheep Breeders' Association, Saline, Mich.; the Vermont, New York & Ohio Merino Sheep Breeders' Association, Delaware, Ohio; and the Michigan Merino Sheep Breeders' Association, Ann Arbor, Mich., are the principal remaining societies.

THE RAMBOUILLET.

The Rambouillet or French Merino breed was developed by the French Government for the purpose of securing a domestic supply of wool. In 1783, Louis XVI bought a large estate near the village of

FIG. 1.—CLASS A MERINO RAM.

FIG. 2.—CLASS A MERINO EWE.

FIG. 1.—CLASS B MERINO RAM.

FIG. 2.—CLASS B MERINO EWE.

FIG. 1.—CLASS C MERINO RAM.

FIG. 2.—CLASS C MERINO EWE.

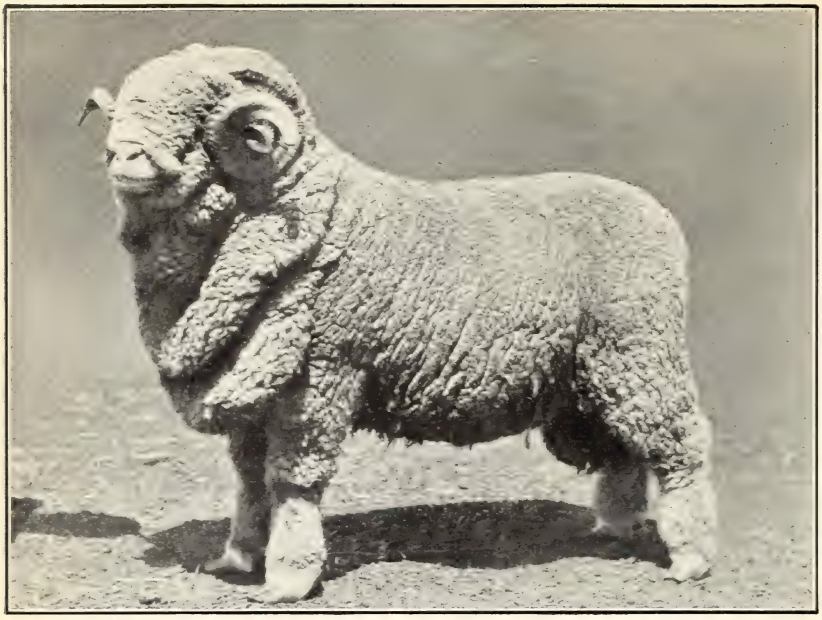


FIG. 1.—RAMBOUILLET RAM.

FIG. 2.—RAMBOUILLET EWE.

Rambouillet, which is located about 40 miles west of Paris. Three years later, M. Guilbert was sent to Spain to purchase foundation stock, and he selected individuals from the best flocks of the Kingdom. He landed 366 head at Rambouillet, and he made another purchase in 1799, but the latter importation lacked the quality of the first lot. These sheep were the nucleus of the breed.

It is claimed that they were developed entirely by selection. The French Government records of the evolution of the breed are remarkably complete and by far the most comprehensive in existence. Increasing the size seems to have been the principal consideration at the outset, and for a time constitution suffered at its expense. Later this was remedied, and the "French" Merino to-day differs from the Spanish in being more robust, larger, having a much superior form, and having fewer folds. They are better covered with wool, especially over the head, and the fleece is heavier and contains less oil and gum. The breeding qualities are also improved and early maturity developed to a greater degree.

All the credit for the development of the Rambouillet is not, however, due to the French Government. Private flocks were established in France at the beginning of the last century, and these sheep were later introduced into northern Germany. In the latter country the Von Homeyer flock at Ranzin, Pomerania, was one of great excellence. This flock was dispersed in 1898, upon the death of the owner. These sheep have also been introduced into Russia, Australia, Argentina, and the United States.

The career of the Rambouillet in this country has been somewhat checkered. They were first introduced by D. O. Collins, of Hartford, Conn., in 1840. Several other importations were subsequently made, but the breed did not prove very popular. They lacked in constitution and did not thrive. Interest in the breed waned until near the close of the century. In 1882, W. G. Markham, of New York, after visiting Europe and being highly impressed with the excellence of this breed in Germany, received a present of a ram and two ewes from the Von Homeyer flock. Two more importations from this flock followed in 1885 and 1891, respectively, and an exhibit of these sheep was made at the Columbian Exposition in 1893. They created a great deal of favorable comment and were called "Elephantine" Merinos because of their large size.

To-day this breed is widespread in its distribution. Their herding qualities, their improved mutton form, and their heavy fleeces have made them especially popular upon the range. Wyoming, Utah, Montana, Washington, California, Idaho, New Mexico, Texas, and Oregon are the most important Rambouillet States in this section. The breed is also quite widely distributed through the farming section. The superior breeding qualities of the ewes adapt them to the

production of "winter" lambs, and they are used to a certain extent for this purpose. Ohio, Michigan, New York, and Indiana are especially prominent Rambouillet States in the Middle West, but even here a large part of their popularity can be indirectly traced to the range demand. The highest prices recorded recently for American-bred sheep have been paid for individuals of this breed, and the superior quality of our home-bred Rambouillets has discouraged importations during recent years. Recently a number of choice shipments have been made to South Africa.

The Rambouillet is the largest of the Merino breeds. Mature rams in breeding condition should weigh from 175 to 225 pounds and should produce from 15 to 20 pounds of wool. Ewes under the same condition range from 130 to 160 pounds in weight and should shear 10 to 12 pounds. The staple should be from 2½ to 3 inches long, but much of it falls short of this length. It commonly grades as fine clothing and combing. The rams usually have large spiral horns, but ewes should always be polled. An entirely polled type has been developed and has been given a trial by some prominent western breeders, but has not proved satisfactory. There has been an effort on the part of some breeders to establish a B and C type of Rambouillets, and classes were established for these at one of our State fairs. This movement should be discouraged, or it will eventually lead to as much confusion as there is at the present time in the different types of American Merinos. The plainer, or C, type of Rambouillet is called for in the West, while eastern breeders prefer the heavier, or B type, sheep. The cross between the Rambouillet and the American Merino has been termed the Franco-American, and a registry association has been organized to record them. They are criticised because of the fact that they do not breed true to type.

The American Rambouillet Sheep Breeders' Association was organized in 1889 at Pontiac, Mich. Up to January 1, 1914, it had recorded 73,305 head. The present headquarters are at Milford Center, Ohio. The International Von Homeyer Rambouillet Club Record was organized December 18, 1902, at Detroit, Mich., and has recorded about 500 head of sheep. Only those sheep that can trace their ancestry through unbroken lines to the Von Homeyer stock are eligible for entry in the latter association.

Following is the scale of points for the Von Homeyer Rambouillet.[1] The American association has no standard of excellence.

Density and length of wool are incompatible. Extreme density of fleece spoils physical development and mutton and wool merits. Stud sheep should be kept in moderate condition by food and exercise to insure constitution and prepotency. Fat covers a multitude of faults. The task is to breed for quality and quantity of wool and mutton equally at the smallest expense.

[1] Ranzin, 8, 2, 1894. v. Homeyer.

I. Constitution is the foundation:
- Shown by physical development, nutritive capability, good stomach, live weight, early maturity, form, and carriage;
- By prepotency to fix the type and constitution on offspring;
- By bone and strong frame, and a soft, loose, pink skin;
- By face and eye, denoting health and vigor;
- By well-set, sound teeth and mouth.

II. Mutton merits:
- Carcass heavy, broad, deep, long, with full and low thigh and flank, set on short, straight pillars.
- Chest and bosom projecting, broad and deep, shoulders flat and broad, back level, ribs round, hips and loin broad.
- Fleshy quarters, hams full and broad, gentle slope from dip to root of tail.

III. Wool merits:
- Length and evenness of staple, 2½ to 3 inches at one year's growth, density of wool plant to insure 20 pounds for rams and 10 to 12 for ewe fleeces.
- Character and style of fleece, clear crimp with oily yolk.
- Uniformity in fineness all over, prima secunda sortiment.
- Covering of head, belly, arms, legs without kemp and jar.
- Absence of coarse jar in fleece.

IV. Characteristic appearance:
- Head broad on top, wide between ears, medium length.
- Horns curling, strong, standing in right angles at base.
- Eyes bright, clear, lids not impaired by folds and wrinkles that press on the lid and cause inflammation.
- Lachrymal glands without signs of inbreeding and inflammation.
- Nostrils large, free from pressure by wrinkles.
- Ears thick, large, and velvety.
- Nose covered with a cream-colored velvety coat.
- Neck short and broad, denoting vigor, with or without folds, my fancy being a belle cravatte.
- Dewlap well out in apron, covered with dense wool.
- Scrotum well wooled to the end.
- Pillars straight, wide apart, in good angle behind.

THE SOUTHDOWN.

The Southdown is probably the oldest breed of sheep in existence. They have been commented upon for centuries by prominent agricultural writers, and there is a distinct record more than 200 years old that refers to this breed and cites an incident where several flocks were entirely destroyed by a disease resembling smallpox.

The breed originated in the low range of hills in southeastern England, known as the South Downs, which extend through the counties of Kent, Sussex, Hampshire, and Dorsetshire.

The progenitors of the Southdowns were known as the Sussex sheep, and they were small, ill-shaped, horned sheep, having dark faces and lacking quality. Their fleeces were light but of good quality, and they had exceptional development of the leg of mutton.

The modern development of the Southdown has undoubtedly been effected entirely through selection. It is said that attempts were made to introduce new blood, but these have been unsuccessful.

Almost a century and a half of careful selection has improved the carcass, especially in development of the fore quarters, neck, and rump. Greater refinement has been attained and the horns have been eliminated. The names of John Ellman, of Glynde, and Jonas Webb, of Babraham, are inseparably connected with early Southdown history. Ellman bears the same relationship to this breed as Bakewell does to the Leicester, and he might fittingly be called the father of the medium-wool breeds.

The distribution of the Southdown is practically universal. They can be found in many parts of England outside of their native shires, and exportations have been made to almost every civilized country. The Southdown has been widely used in the development of the other medium-wool breeds of sheep, and there are very few, if any, of these that do not owe, either directly or indirectly, some part of their improvement to Southdown blood.

The first reliable record we have of Southdowns in this country is that of Dr. Rose's flock, in Seneca County, N. Y. In 1803 these sheep were reported as doing well. In all probability importations were made many years previous, and they have taken place almost continuously since that date.

The Southdown is the mutton sheep par excellence. There is no better combination of quality and beauty in the ovine world; hence their name, the "gentleman's sheep." This breed is remarkable in having a large number of wealthy admirers and breeders whose flocks have been of more than ordinary excellence, though even now, as a rule, the best specimens are imported from their native hills. The lawns of quite a number of famous country estates are kept closely cropped by these ovine aristocrats and they are also used upon the parks in some of the large cities.

Their distribution has been from the Atlantic to the Pacific and from Mexico to Canada, though they are not seen in as large numbers as some of the larger breeds. They have attained their greatest popularity in the South. In the spring-lamb region of Tennessee, Kentucky, and Virginia, Southdown rams are used almost exclusively. This country has few other sections where one breed has been adopted for a standard over so wide a range of territory. Other breeds have been tried here, and in some cases have produced larger lambs, but they lacked quality and condition and have not succeeded in supplanting the Southdown to any appreciable extent. The lambs of the latter attain a weight of 60 to 90 pounds when from 3 to 4 months old, and are ready for market the latter part of May, during June, and early July. Gains of from 1 pound to $1\frac{1}{4}$ pounds per lamb per day are reported for short periods during the best growing season. The early lamb is the object sought after,

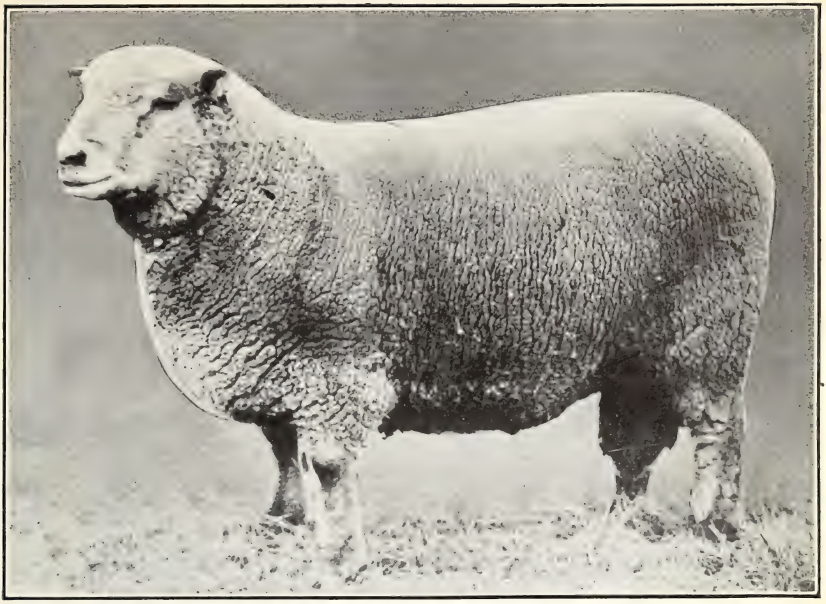


FIG. 1.—SOUTHDOWN RAM.

FIG. 2.—SOUTHDOWN EWE.

FIG. 1.—SHROPSHIRE RAM.

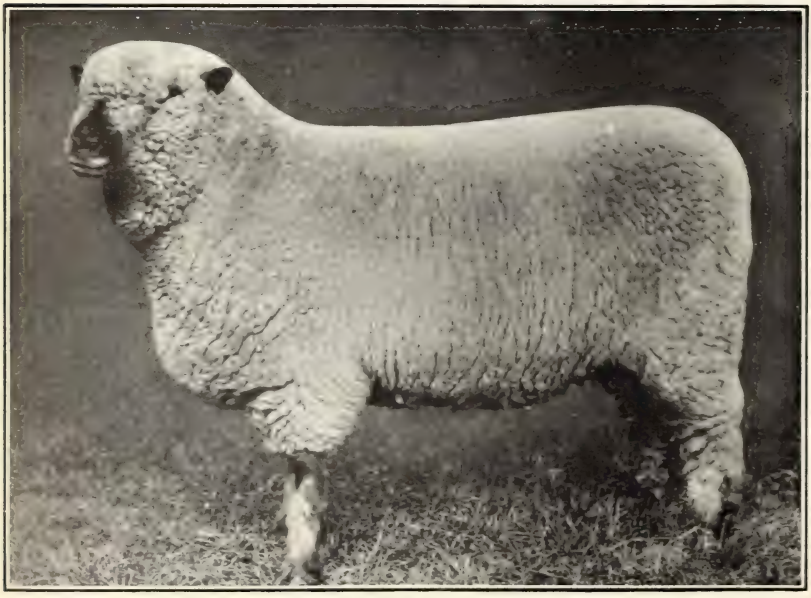


FIG. 2.—SHROPSHIRE EWE.

little attention being given to wool; hence the Southdown fills the place to perfection.

They are also popular in the Middle West and in New York. Here Southdown rams are frequently used for siring winter or hothouse lambs. Rams are also bred for the spring-lamb section of Kentucky and Tennessee. In the far West they have been used only to a limited extent, the objection to them being that they are too small and that their fleeces are too light.

The Southdown is the smallest of the mutton breeds. They are, however, remarkably compact; their deceptive weights causing them to be called "the big little sheep." Mature rams in breeding condition should weigh from 170 to 190 pounds and ewes from 125 to 130 pounds.

In the carcass contests at the International Show at Chicago since its inauguration in 1900 purebred, grade, and crossbred Southdowns have won 51 out of 84 possible prizes. Five out of eleven grand champions have also been of Southdown breeding.

The wool of the Southdown is of good quality, but the fleeces are not as heavy as might be desired. The ewes' fleeces should weigh from 6 to 8 pounds and the ram's from 10 to 12 pounds. The Government flock at the Morgan Horse Farm, Middlebury, Vt., has averaged approximately 7 pounds in weight of fleece during recent years, one of the breeding rams producing more than 12 pounds of wool. This wool graded very largely three-eighths and one-half blood combing, but in many flocks in this country clothing wool would predominate because of the shortness of fiber.

The breed is noted for its early maturity and its easy keeping qualities. Southdowns thrive upon pasture that would be entirely insufficient for the larger breeds. They are undeniably a short-pasture sheep. In fecundity they are fair, but not equal to the best. The Government flock mentioned before has given a 125 per cent lamb crop for ewes bred and 140 per cent for ewes lambing.

The most serious criticism that can be offered against the Southdown is that they are small and produce light fleeces. The superior quality of their mutton is not regarded high enough in many places in this country to offset these objections; hence the larger, heavier-fleeced breeds have to a certain extent occupied the place that they might otherwise fill. Years ago the dark-faced Southdown was preferred, but in recent years the lighter color is much more popular.

The Southdown Sheep Society of England published the first volume of their flock book in 1892. The American Southdown Association was incorporated June 23, 1882, at Springfield, Ill., where its office is still located. They had recorded up to January 1, 1914, 30,645 sheep.

The following is the standard of excellence for Southdown sheep:

	Points.
Head medium in size and hornless, fine, carried well up, the forehead or face well covered with wool, especially between the ears and on the cheeks, and in the ewe slightly dished	5
Lips and under jaw fine and thin	1
Ears rather small, tolerably wide apart, covered with fine hair, and carried with a lively back-and-forth movement	2
Eyes full and bright	3
Face a uniform tint of brown, or gray, or mouse color	3
Neck short, fine at the head, but nicely tapering, and broad and straight on top at the shoulders	4
Shoulders broad and full, smoothly joining the neck with the back	5
Breast wide, deep, and projecting well forward, the forelegs standing wide apart	5
Back and loin broad and straight from shoulders to rump	7
Ribs well arched, extending far backward, the last projecting more than the others	6
Rump broad, square, and full, with tail well set up	6
Hips wide, with little space between them and last ribs	6
Thighs full and well let down in twist, the legs standing well apart	6
Limbs short and fine in bone, and in color to agree with the face	3
Forelegs well wooled and carrying mutton to the knees, but free from meat below	2
Hind legs well filled with mutton and wooled to the hocks, neat and clean below	2
Belly straight and covered with wool, the flank extending so as to form a line parallel with the back or top line	5
Fleece compact, the whole body well covered with moderately long and close wool, white in color, carrying some yolk	12
Form throughout smooth and symmetrical, with no coarseness in any part	9
General appearance spirited and attractive, with a determined look, a proud and firm step, indicating constitutional vigor and thorough breeding	8
	100

THE SHROPSHIRE.

Although little more than half a century old, the Shropshire is to-day the most popular breed of medium-wool sheep. They attracted little attention prior to 1848, when they first received the name they now bear. They were first recognized in the prize lists of the Royal Show held at Wiltshire in 1857, but did not receive a place as a distinct breed until 1859, when the show was held at Warwick.

The breed originated in Shropshire, or Salop, as it is sometimes called, and the neighboring county of Stafford, in west-central England, Shropshire being bounded on the west by Wales.

Authorities are not all of the same opinion as to the exact origin of this breed, but it is quite generally agreed that the Morfe Common were the foundation stock, this being improved by the introduction of Southdown, Cotswold, and Leicester blood. The Longmynd, the Clun Forest, the Cannock Chase, and the Whittington Heath are also considered by some authorities as being involved in the evolution of this breed.

The Morfe Common were a small-horned sheep with black, brown, and spotted faces. Their carcasses weighed from 35 to 65 pounds, and the average weight of fleece was about 2 pounds. Their wool was of reputed good quality. The infusion of Southdown blood improved the mutton qualities and removed the horns. The Cotswold and Leicester blood increased the size and weight of fleece and introduced early maturing qualities. The introduction of new blood caused a lack of uniformity for a time, but this has been subsequently overcome by careful selection. Among the early improvers of the breed were Samuel Meire, of Berrington, and George Adney, of Harley.

From its home in Shropshire this breed has spread into practically every county in England. It may also be found in Scotland, Ireland, Russia, and nearly all other countries where improved sheep have been introduced.

An importation of Shropshires was made into Virginia in 1855, but the records do not state who imported them. Samuel Sutton, of Relay House, Md., brought over another lot in 1860, and since that time there have been many importations. In fact, few other breeds are being imported in greater numbers at the present time.

The profitable combination of wool and mutton the Shropshire represents has caused it to be known as the "farmers' sheep," and it has been especially popular in the farming sections of America. However, this breed has not only found a home under these conditions, but it has been used extensively in the West for crossing upon range ewes. Because of its wide range of adaptability and consequent popularity, it is doubtful whether there is a State in the Union that does not possess flocks of this breed. The Shropshire is also prominent in the show ring, as attested by the large classes exhibited. They usually overtop any other breed in respect to numbers, and there have been instances where they outnumbered all other breeds combined. It is a source of considerable satisfaction to American Shropshire breeders to know that their best sheep are not surpassed in excellence by any imported. This is also a tribute to the breed, as it indicates that the Shropshire does not deteriorate when removed from its native home, but maintains its type and soon becomes acclimatized. The winnings at the International Live Stock Exposition, tabulated on pages 57 and 58, indicate to some extent the prominence of the breed.

At present the Shropshire is an early maturing breed of pronounced fecundity. They are medium sized, rams weighing from 175 to 250 pounds and ewes from 140 to 180 pounds. Their wool is of good quality and weight, fleeces ranging from 8 to 15 pounds. One of the best ewe flocks in this country, comprising over 200 head, produced 10.31 pounds per head, which is a very good average. From data

secured from leading Shropshire breeders, an average of 8 to 9 pounds is considered very satisfactory. Most Shropshire fleeces grade three-eighths blood combing or clothing.

In the past the Shropshire has been unfavorably criticized for being light in the hind quarters, but notable improvement has been accomplished in this respect. Black fiber and dark spots on the skin are other objections that have been noted in inferior individuals. When in high condition, especially when carelessly fed, there is a tendency for the Shropshire to become "patchy," but this is true of all breeds to a certain extent.

The English Shropshire Sheep Association was founded in 1882. It published the first volume of its flock book the next year, and this was the first British sheep record to appear. The American Shropshire Breed Association has been in existence since February, 1884, when it was organized at Lafayette, Ind. It is the strongest live-stock organization in existence, and up to January 1, 1914, it had registered 385,411 head of sheep. The offices are still located at Lafayette. The following are the points of excellence and scale of points for the breed:

	Points.
1. Type and general appearance	30
An alert, attractive, and stylish appearance, showing at a glance the true characteristics of the Shropshire.	
2. Form and constitution	35
Head: To impress at once the Shropshire characteristics.	
Heads of rams: To be masculine, as indicated by a broad nostril; short; broad between ears and eyes.	
Neck of rams: Short and muscular, fitting into shoulders in graceful outlines.	
Heads of ewes: To be feminine in appearance, medium in length, but not delicate.	
Neck of ewes: Not so strong as in the ram. In all cases head and face nicely covered with wool; ears, short and erect; eyes, bright; color of face, brown to a clear dark (not sooty black).	
Body: Well proportioned, with shoulders so placed as to fit in evenly to a deep wide brisket. A full heart girth; broad level back; ribs well sprung, with straight underline; loins thick fleshed; fore and hind flank deep, a low-coupled twist, and full leg of mutton.	
Legs: Brown to clear dark color (not sooty black); well set apart; short and straight, with strong upright pasterns.	
Size: When fully matured and in proper breeding condition, rams should weigh not less than 175 to 250 pounds and ewes not less than 140 to 180 pounds.	
3. Fleshing	25
While the body should be well formed, with the full outline pleasing to the eye, yet it is the quality and quantity of flesh, not fat, which gives value to the carcass. Therefore the parts furnishing the high-priced cuts should be fully developed.	
The back, loins, and legs should be so fleshed as to show a large percentage of flesh compared with the other parts of the body; at the same time symmetry must prevail throughout.	
Strong bone in legs conformable with size of body usually goes with a large proportion of lean meat to fat in the finished carcass.	

Points.

4. Fleece and skin 10

Fleece of good length, elastic to the touch, medium fine and slightly crimped, free from black fiber and hairiness. Ram's scrotum to be well covered with wool.

Rams should shear 8 to 15 pounds of wool and ewes 7 to 11.

Skin to be a bright cherry or clear color and comparatively free from dark spots.

Objections:

Long, narrow head, with long ears and neck; long legs; black wool on head to any noticeable extent; failure of wool to meet closely at the junction of face-wool and on checks; white spots on face and legs; crooked spine; light flanks, with long, weak pasterns; spotted skin; narrow chest, showing lack of constitution.

Disqualification for registry:

Such lack of type as to render it doubtful to a breeder what the breed is; horns or stubs, not scurs. Heads quite bare of wool.

THE HAMPSHIRE.

The native home of the Hampshire sheep is in the county of the same name, which is located in south England, bordering upon the English Channel.

The breed was evolved about three-quarters of a century ago and for a time was known as the West County Downs. They were first exhibited at the Royal Show at Oxford in 1837 under this name. They did not receive a class of their own until the show was held at Salisbury in 1857.

The Hampshire of to-day is the result of the amalgamation of two native types, into which had been introduced the blood of one or more improved breeds. These two types were known as the Wiltshire and the Berkshire Knots.

The Wiltshire sheep were native of North Devon, Somersetshire, Buckinghamshire, and Berkshire. They were the largest fine-wool sheep of Britain. They were white-faced, horned, slow-maturing sheep of rather inferior mutton qualities. They undoubtedly had been in existence for centuries, for it is said that the old Roman woolen mills at Winchester were supplied with wool from these sheep. They were also known as "crooks," because of the peculiar shape of their horns.

The Berkshire Knots were also a horned type, very rugged and hardy, but with black faces and legs.

The two native types were crossed and recrossed with Southdowns. Along with the improvements introduced, this decreased the size, which was remedied by selecting the largest ewes and rams for breeding purposes. Some Cotswold blood was also introduced by at least one early breeder, Mr. John Twynham.

By 1835 the native types had been largely covered up in a "modified type of Southdown," though they still retained some of the characteristics of the older breeds, especially in size and quality of

wool. When exhibited in 1840, they were smaller, less compact, narrower in front, and lighter in color than the Hampshire of to-day.

The present breed owes much of its excellence to the work of William Humphrey, of Oak Ash, Newberg, and James Rawlence, of Bulbridge, Wilton, Hampshire.

Flocks of Hampshires can be found to-day in Wiltshire, Berkshire, Dorsetshire, Sussex, and Surrey, besides their native county. At Isley, in Berkshire, as many as 33,000 Hampshires have been shown at the fair. Exportations have been made to the United States, Canada, Mexico, South America, South Africa, and to many countries of Europe.

Importations of Hampshires were made to Virginia prior to the Civil War, but in the strife that followed they were neglected and all records were lost. It is said that the dark-faced sheep of North Carolina are descended from these Hampshires.

In 1865, Thomas Messinger, of Great Neck, Long Island, made an importation. For more than a quarter of a century very few Hampshires were brought over, but about 1880 interest in the breed was revived and importations became more frequent. During the past few years they have been especially popular, and larger importations have been made of Hampshires than any other breed. One importation numbered over a thousand ewes.

No breed of sheep will give more satisfactory returns than the Hampshire, if accorded good care and given plenty of feed. Neither will any other breed deteriorate more rapidly, if these are denied. They are unable to rustle for themselves to the extent of some other breeds, consequently they do not thrive upon broken or scanty pasture. They are especially adapted to an intensive system of farming, such as hurdling upon green forage crops, rape, turnips, etc.

Purebred flocks of Hampshires are confined largely to the States of Kentucky, Ohio, Indiana, Illinois, Michigan, and New York in the East and Idaho, Montana, Wyoming, and Missouri in the West. Hampshire rams are used quite widely upon the range for crossing upon ewes of other breeds for the production of market lambs. The Hampshire lambs are large; they grow rapidly and attain their greatest perfection while comparatively young—the reason for their wide popularity. In the East the rams are frequently used for siring "hothouse" lambs.

The Hampshire, with possibly one exception (the Oxford), is the largest of the Down breeds, and it is excelled in size only by the Lincoln and the Cotswold among the long wools. Hampshire rams generally range in weight from 225 to 275 pounds and the ewes from 175 to 200 pounds. The popularity of the Hampshire lamb speaks for the mutton qualities of this breed.

The head of the Hampshire is very characteristic. The face is black, and they have a Roman nose. The ears are large, somewhat pointed,

FIG. 1.—HAMPSHIRE RAM.

FIG. 2.—HAMPSHIRE EWE.

FIG. 1.—OXFORD RAM.

FIG. 2.—OXFORD EWE.

and extend out almost at right angles from the head. The fleece is of medium quality and not as heavy as is desired, usually ranging in weight from 6 to 8 pounds, and the greater portion of the wool grades quarter and three-eighths blood combing.

The Hampshire is unexcelled in early maturity, the rams commonly being used for breeding purposes when from 7 to 9 months old. The fecundity of this breed is very creditable, though some of the others surpass it slightly in this respect.

The principal criticism of the Hampshire is that they require the best of attention or they soon become "weedy." They require an abundance of food and are not satisfactory where pastures are short or broken.

The Hampshire Down Sheep Breeders' Association of England was organized during December of 1889 at the Agricultural Hall, Islington, during Smithfield week. The Hampshire Down Breeders' Association of America was organized November 4, 1889. To January 1, 1914, 49,640 sheep have been registered by this association. The secretary is located at Coldwater, Mich. The following is the standard of excellence of the American association:

HEAD AND LEGS.

Head: Moderately large, but not coarse; well covered with wool on forehead and cheeks.
Nostrils: Wide.
Color (head and legs): Dark brown or black.
Eyes: Prominent and lustrous.
Ears: Moderately long and thin, and dark-brown or black color.
Legs: Well under outside of body; straight, with good size of bone; black.

NECK, SHOULDERS, AND CHEST.

Neck: A regular taper from shoulders to head, without any hollow in front of shoulders; set high up on body.
Shoulders: Sloping, full, and not higher than the line of back and neck.
Chest: Deep and full in the heart place, with breast prominent and full.

BODY.

Back: Straight, with full spring of rib.
Loin: Wide and straight, without depression in front of hips.
Quarters: Long from hips to rump, without sloping, and deep in thigh; broad in hips and rump, with full hams; inside of thigh full.

SCALE OF POINTS.

Head: Size and shape, 5; ears and eyes, 3; color, 5; legs and feet, 2	15
Neck, shoulders, and breast: Neck, 5; shoulders, 10; chest and breast, 15	30
Body: Back and loins, 15; rib, 5	20
Quarters: Length, 10; width, 10; twist, 5	25
Wool: Forehead and cheeks, 2; belly, well covered, 3; quality, 5	10
Total	100

THE OXFORD DOWN.

The Oxford Down originally was a crossbred sheep, having developed from the direct crossing of well-established types. Although improved blood of other breeds has been used in establishing most of our present ones, evolving an entirely new breed by direct crossing is comparatively rare, the Corriedale of New Zealand and Australia being the only other example.

The initial crossing that eventually resulted in the establishment of the Oxford breed took place about 1833 in Oxfordshire. Cotswold rams were used upon Hampshire ewes and some Southdown blood is also said to have been introduced. The object was not the establishment of a new breed but improvement in the existing breeds.

These crossbred sheep first appeared at the Windsor Royal in 1851 under the name of Down Cotswold. About 1857 their name was changed to Oxfordshire Downs. They did not receive a distinct place at the Royal until it was held at Battersea in 1862. As was to be expected, this breed was at first characterized by a striking lack of uniformity, the judges of the Royal criticizing the exhibits of the years of 1862, 1865, and 1868 very unfavorably for this defect. During the next 10 years there was a very great improvement in this respect, the type becoming much more permanent. Mr. Samuel Druce, of Eynsham, Oxford, and Mr. William Gillette, of Southhigh, were actively identified with the early development of the Oxford breed.

The Oxford has extended its sphere of usefulness from its native shire to many parts of England, Scotland, Ireland, and Wales. It is especially popular for crossing purposes along the "border" of the first two countries. This breed has also been introduced into many countries of Europe, North and South America, Australia, and New Zealand, in which countries it has generally met with success.

The first importation of this breed of sheep to America was made by Clayton Raybold, who brought them to Delaware in 1846. This was in the early days of the breed, and they were still known as Cotswold crossbred sheep. In 1853 William C. Rives brought some into Virginia, and R. S. Fay, of Lynn, Mass., made an importation the same year.

In the United States the greatest number of purebred Oxford flocks are found in New York, Ohio, Michigan, Wisconsin, Illinois, and Iowa. In the West there are some purebred flocks, but here the breed is valued chiefly for crossing purposes. Indeed, many flocks are maintained for supplying the range with rams, as the Oxford, because of its large carcass and heavy fleece, has been very popular during the last decade. Wherever the pasture is abundant the Oxford gives satisfaction, but it is in no sense a short-pasture sheep and does not usually thrive under the latter conditions.

The Oxford is generally conceded to be the largest of the medium-wool breeds. Mature rams range in weight from 250 to 350 pounds

and ewes from 180 to 275 pounds. The fleece is heavy, but it derives most of its weight from its length, as it is somewhat open in character, due to Cotswold blood. Superior Oxford flocks should shear 12 pounds of wool, on an average, of quarter and low quarter blood combing wool, though Oxford fleeces occasionally grade as braid wool.

The breed does not mature so early as some of the smaller ones, but they are at least average in this respect. Their fecundity is also about the average.

Objections to inferior Oxford Downs are open fleeces, dark spots on the skin, and occasional black fiber.

The English Oxford Down Breeders' Association was established in August, 1888. The American Oxford Down Record Association drew up its articles of incorporation at Cincinnati, Ohio, in January, 1882, after having met at least once during the previous year. The number of sheep recorded by this society up to January 1, 1914, is 67,280. The office of the secretary is now at Hamilton, Ohio. The following is the scale of points of the American Oxford Down Record Association:

BREED TYPE FOR ANIMALS.

	Points.	
Form of a good general appearance, made by a well-balanced conformation, free from coarseness in any part, and showing good style both at rest and in motion	15	
Head of moderate length and width between the ears and between the eyes, and well covered with wool over poll and down to the eyes. Color of face an even dark gray or brown, either with or without gray spot on tip of nose	6	
When fully matured and in good condition, rams should weigh 250 to 350 pounds; ewes, 180 to 275 pounds	5	
Ears medium size, not too thick and of an even brown or dark gray color	2	
Legs short, strong in bone, flat and of even dark gray or brown color, placed squarely under the body and well apart	2	
		30

CONSTITUTION.

Large around the heart and wide and full in the chest	10	
The movement must be bold and vigorous	5	
Eyes bold, prominent, and bright	4	
Skin bright pink in color	3	
Neck strong and muscular in rams and well set on in both sexes	3	
		25

MUTTON FORM AND QUALITY.

Wide and straight on top of shoulders, back, loin, and rump, from base of neck to tail	15	
Full shoulders and thighs, well meated both inside and outside	5	
Flanks well filled and strong so as to make the lower lines of the body as straight as possible, and the side lines straight or rather full	4	
The whole carcass evenly covered with good, well-marbled meat	6	
		30

WOOL.

Fleece of moderate length, close and of even quality, covering the whole carcass well, and free from black patches upon the body, neck, or head	15	
Total		100

THE DORSET HORN.

The Dorset Horn, like the Southdown, is an extremely old breed that has been developed largely through selection. For several centuries there had existed in the county of Dorset in southern England a type of sheep that were coarse, small, and light of carcass, especially in fore quarters, but with broad, deep loins. They had dark noses and both sexes were horned. In Somerset was a larger, lankier type, producing longer wool and noted for their large lambs. They had white faces and pink noses. These types were probably the ancestors of the Dorset Horn.

Little improvement was wrought in this breed until near the middle of the last century, and as mentioned in the preceding paragraph this improvement was effected through well-directed selection. Crossing was tried by a few breeders with both the Devonshire Knots and the Leicesters, but the attempts to introduce foreign blood resulted in failure.

Not a little credit for the latter development of this breed is due to Richard Seymour, of Bradpole, who began improving his flock about 1830. Mathew Paul, of Burstock, was another early Dorset breeder of prominence.

Although the sheep of Dorset and Somerset have long been recognized as distinct in type from those of surrounding counties, they were not assigned a place as a separate breed until 1862, when they were shown as such at the Royal at Battersea.

The stronghold of the Dorset Horn is still in its native district of Dorset, Somerset, and Devon. In the former two counties it is the predominant breed. The section about Dorchester and the Isle of Wight possess many flocks of marked excellence. Small flocks are scattered over England, Scotland, and Ireland, but their distribution does not approach that of the more popular down breeds. They have also been exported to the Continent and to America.

It is said that Dorset Horn sheep were first introduced into Virginia prior to 1882, but information as to where the shipment was made and who made it is lacking. Some representatives of this breed were shown at the fat stock show at Chicago in 1885, and two years later William Davey, of Lockport, N. Y., purchased some individuals of this breed from Valency E. Fuller, of Canada. The same year direct importations were made from Great Britain by A. Thayer, of Hoosick Falls, and E. F. Boroditch, of Massachusetts. In 1889, T. S. Cooper, of Pennsylvania, made a large importation, consisting of 153 head.

Dorsets can be found to-day in at least 32 States of the Union. New York, Ohio, Illinois, West Virginia, Massachusetts, Pennsylvania, Indiana, and New Jersey, in the order named, have the largest number of purebred flocks, and most of the other flocks are to be found in the eastern half of the country.

FIG. 1.—DORSET RAM.

FIG. 2.—DORSET EWE.

FIG. 1.—SUFFOLK RAM.

FIG. 2.—SUFFOLK EWE.

There are very few Dorset flocks west of the Mississippi. Dorset wethers lack the finish characteristic of the lambs. Their fleece is not as heavy as is desirable. The lack of higher development in these two respects will probably prevent their ever becoming popular upon the range.

The Dorset Horn is a medium-sized, somewhat rangy, white-faced breed, both sexes being horned, as the name would indicate. There is considerable variation in the size of American Dorsets, but rams in breeding condition should weigh from 200 to 225 pounds; ewes from 150 to 175 pounds. Their fleeces lack somewhat in weight, but are of excellent quality. The fiber is very white, and discolorations are practically unknown. Ewes produce from 6 to 7 pounds and rams from 8 to 10 pounds of wool. Twenty-five samples of Dorset fleece were graded upon the Philadelphia market, for the United States Department of Agriculture, 15 of which were three-eighths blood combing and the other 10 quarter blood combing wools.

The Dorsets are probably the most fertile of all the mutton breeds of sheep, ewes frequently producing twins and triplets, and occasionally quadruplets. American breeders report from 140 to 175 per cent lamb crop. The ewes will breed either in the spring or fall, and it is claimed that they will produce two crops of lambs per year, but it is unlikely that this can be successfully accomplished, as most American breeders of prominence condemn the practice as being injurious to the ewes. The ewes are excellent mothers and usually have ample milk for their lambs, whether they be singles, twins, or triplets. In the United States a large percentage of the ewes lamb in the fall, many breeders having the entire crop dropped at this time. In their native shire the ewes were formerly used for dairy purposes.

The breed matures early, the lambs growing rapidly and exhibiting a bloom that they often do not retain during the wether stage.

Dorset ewes are very highly regarded for the production of "hot-house" lambs, and the grades are considered even better for this purpose than the purebreds. The East, with its large cities and consequent favorable market facilities, is especially adapted to the production of this product, which explains the distribution of the breed in this section.

The light shearing qualities and the fact that the Dorset is a hard feeder are the main objections to this breed. Dorset lambs are as a rule excellently fleshed, but the criticism has been made that the wethers are deficient upon the shoulders and back. The breed is also criticized for being deficient in heart girth. This is especially true of the rams.

The Dorset Horn Sheep Breeders' Association of England was founded in 1891. The American Dorset Horn Breeders' Association was founded the same year, but has been inactive of late years. The

Continental Dorset Club was founded in 1897, and up to January 1, 1914, it had recorded 15,030 sheep. The secretary's address is Mechanicsburg, Ohio. The following is the scale of points of the breed as adopted by the last-named organization:

SCALE OF POINTS.

Head: Neat, face white, nostrils large, well covered on crown and under jaws with wool	5
Horns: Small and gracefully curving forward rather close to jaw	5
Eyes: Prominent and bright	2
Ears: Medium size, covered with short white hair	2
Neck: Short, symmetrical, strongly set on shoulders, gradually tapering to junction of head	5
Shoulders: Broad and full, joining neck forward and chine backward with no depression at either point (important)	15
Brisket: Wide and full, forward, chest full and deep	8
Fore flank: Quite full, showing little depression behind shoulder	8
Back and loin: Wide and straight, from which ribs should spring with a fine, circular arch	10
Quarters: Wide and full, with mutton extending down to hocks	10
Belly: Straight on under line	3
Fleece: Medium grade, of even quality presenting a smooth surface and extending over belly and well down on legs	12
General conformation: Of the mutton type, body moderately long; short, stout legs, placed squarely under body; skin pink; appearance attractive	15
Total	100

SUFFOLK DOWN.

The Suffolk Down is a comparatively new breed of sheep that has originated in Norfolk and neighboring counties of southeastern England. The Suffolks owe their origin to the crossing of Southdown and possibly Hampshire rams upon the Old Norfolk breed. These latter sheep have been described as being active, robust, upstanding, with black faces and legs, and horned in both sexes. They were very prolific and produced fleeces of fine, soft wool averaging about 3 pounds in weight.

The Southdown blood improved the carcass, increased the early-maturing qualities, and removed the horns. It is claimed that no foreign blood was introduced after 1850. Separate classes were made for the breed at the Suffolk show in 1859, when they received their present name. Prior to this date, they had been known as Southdown-Norfolks, and locally as Blackfaces. The breed was not considered established well enough to merit a class at the Royal Show until the meeting of 1886. George Dobito, of Ludgate, Suffolk, stands preeminent among the early improvers of this breed, and he began work about 1850.

The extent of distribution of the Suffolk does not approach that of the other Down breeds, but they are fairly common in the counties of

Norfolk, Suffolk, Cambridge, Essex, and Kent, and are found in scattered flocks over other parts of England. The excellent quality of their mutton and their high dressing percentage have won them an enviable position upon the English mutton market, and the prizes won by this breed in carcass contests at the leading shows are especially numerous. The newness of the breed and the fact that they have not been intensively advertised are factors in their limited distribution, but importations have been made into the countries of Holland, Germany, France, Spain, and Saxony, of Europe, and to Australia, New Zealand, South Africa, and North and South America. In the latter country they are quite popular for crossing upon Merino ewes because of the excellence of the resulting lambs.

The first importation of Suffolk Downs into this country was made by Mr. M. B. Streeter, of Brooklyn, N. Y., in 1888. Other importations have since followed. Purebred Suffolks have been recorded from 16 States, Iowa, Indiana, Illinois, the Virginias, and New York having the largest number of flocks. The fact that only one or two shows in this country have distinct classes for this breed indicates that the Suffolk has not yet secured a very firm foothold in America.

The Suffolk is a rather active, large, upstanding sheep, rams weighing from 200 to 240 pounds and ewes from 150 to 200 pounds. They are characterized by their jet black head and legs, being darker than any of the other breeds in these points. The ears are pointed and are frequently carried pointing upward and backward from the head. They have no wool on the face, or upon the legs from the knees and hocks downward. Though upstanding in appearance, these sheep dress out to good advantage. In 1903 a Suffolk won first in the carcass contest at the International at Chicago. The mutton is of excellent quality, closely approaching that of the Southdown. Their fleeces are light, but the wool is soft and of fair quality, grading low three-eighths and quarter blood combing. Flocks have been reported averaging 9 pounds of wool, but it is probable that the average is considerably below this figure.

The fecundity of the Suffolk is very high, ranking near the top. They are an early-maturing sheep, as indicated by the wide use of the ram lambs for breeding purposes.

The most serious criticisms of the Suffolk are their light fleeces and upstanding appearance. They are fair in feeding qualities, and if the prejudice against their lanky appearance can be overcome, there is no reason why they should not become much more popular in this country.

The English Suffolk Down Sheep Society was organized in 1888 for the purpose of registering purebred flocks. The American Suffolk Flock Registry was founded in 1892 with headquarters at Des Moines, Iowa. There were 2,264 Suffolks recorded in the United States and Canada up to January 1, 1914.

The following is the scale of points of the Suffolk Sheep Society of England:

	Points.
Head: Hornless; face black and long, and muzzle moderatly fine, especially in ewes. (A small quantity of clean, white wool on the forehead not objected to.) Ears, a medium length, black and fine texture. Eyes, bright and full	25
Neck: Moderate length and well set (in rams stronger, with a good crest)	5
Shoulder: Broad and oblique	5
Chest: Deep and wide	5
Back and loin: Long, level, and well covered with meat and muscle; tail broad and well set up. The ribs long and well sprung, with a full flank	20
Legs and feet: Straight and black, with fine and flat bone. Wooled to knees and hocks; clean below. Fore legs set well apart. Hind legs well filled with mutton	20
Belly (also scrotum of rams): Well covered with wool	5
Fleece: Moderately short; close, fine fiber without tendency to mat or felt together, and well defined, i. e., not shading off into dark wool or hair	10
Skin: Fine, soft, and pink color	5
Total	100

THE CHEVIOT.

The origin of the Cheviot is obscure. There is an old legend to the effect that they came out of the sea, presumably having swam ashore from one of the wrecked ships of the Spanish Armada. Another theory is that they are the sole representatives of an old type that in ages past occupied a large portion of Scotland. Flocks of the breed are said to have been maintained by the monks of this region during the Middle Ages on the pasture lands surrounding the monasteries. The breed is an old one at any rate. They received their present name about 1791, but are locally known as the "long sheep" in contradistinction to the "short" or Black-faced Highland sheep.

As stated before, the Cheviot is an extremely old breed. As early as 1757, Mr. Robson, of Belford, purchased some Lincolnshire rams to use upon his flock and by so doing made considerable improvement in the breed. Edminstoun and Kerr, other eminent Cheviot breeders, followed the same practice and likewise got good results. Later, Leicester blood is said to have been introduced, carrying with it the improvements that this breed almost invariably effected, namely, early maturity and improvement of form. For a long term of years the breed has been kept pure, any later attempts to introduce new blood having failed.

The distribution of the Cheviot to-day is through the counties of Roxbury, Dumfries, Peebles, and Sutherland, in Scotland, and Northumberland, in England. At the beginning of the last century the Cheviot became very popular and crowded back the Black-faced Highland to a considerable extent. The principal reason for this was that the wool of the former was in high demand, and the Cheviot was consequently more profitable than the Black-face.

FIG. 1.—CHEVIOT RAM.

FIG. 2.—CHEVIOT EWE.

FIG. 1.—TUNIS RAM.

FIG. 2.—TUNIS EWE.

Bad weather for several years reduced the lamb crop of the former breed to such an extent that the Black-face soon regained its prestige, because of its greater hardiness in this respect. The breed is now extensively used in cross breeding upon mountain sheep. Cheviots are also being bred in a limited way in Iceland, and they have been introduced into New Zealand.

Cheviots were brought into Canada about 1825. Mr. Robert Youngs, of Delphi, Delaware County, N. Y., made the first importation into the United States in 1838. Another importation into the same county followed shortly afterwards, and other shipments were brought over, but active interest did not manifest itself in the breed until about 1880.

The Cheviot flocks of this country are entirely confined to the farming sections. New York, Indiana, Illinois, Wisconsin, Pennsylvania, and Ohio have the largest numbers. New York has probably as many as all the other States named.

Some years ago it was thought that the Cheviot would prove popular upon the range, but for some reason, probably the fact that they do not herd well, they have failed to establish a foothold in the West.

The Cheviot is a rather small, hardy breed of pronounced grazing qualities. Among their native hills they graze the year around, pawing aside the snow to find the grass, if necessary. Mature rams in breeding condition should weigh from 175 to 200 pounds and ewes from 140 to 160 pounds. The stylish carriage and comely manner of the Cheviot has characterized them as the "ladies'" sheep.

The head and ears are free from wool and covered with short, white hair. There is a distinct ruff or collar about the neck. The legs are woolless.

The mutton is of good quality and the wool is exceptionally white, containing little yolk or oil, and averages about 5 inches in length. The fleeces are, however, rather light, rams producing from 7 to 11 and ewes from 6 to 9 pounds, as a rule, of quarter blood combing wool. The fertility of the Cheviot is quite high, twins being frequent, and the ewes are very good mothers.

Wonderful improvement has been made in American-bred Cheviots during the past few years. Owing to this fact very few Cheviots have been imported.

Like most of the mountain breeds, the Cheviot is light in the forequarters. They are also subject to the criticism of not being very well fleshed over the back and shoulders. "Scurs" or stubs of horns and reddish or tan colored hair upon the face sometimes crop out in inferior individuals.

The Cheviot Sheep Society of Great Britain was founded in 1891. In America the American Cheviot Sheep Breeders organized in 1891. The National Cheviot Sheep Society was founded in 1894, there

having been some disagreement among the breeders of this country. In 1900 the two societies combined under the name of the American Cheviot Sheep Society and maintains an office at Fayetteville, N. Y. Up to January 1, 1914, they had registered 8,115 head. The following is the standard for judging Cheviot sheep:

	Points.
General conformation and quality: Deep and full breast and large through chest; back wide and straight, with well-sprung, deep ribs; legs well placed and leg of mutton full and thick; body well fleshed, skin pink, with no blue or dark coloring; fleece compact and medium fine; bone strong and fine; general appearance graceful, symmetrical, active	20
Size: In good flesh when fully matured a 24-months-old ram should weigh not less than 225 pounds and a ewe not less than 150 pounds	10
Head: Should be medium short and broad, with ample breadth between the eyes; ears should be of medium length and usually erect when at repose; head covered with clear white hairs, extending from nostrils to back of poll; ridge of head from between eyes to nostrils straight or slightly arched with females and more strongly arched or Roman with rams; color of tip of nose black	15
Body: Well proportioned, having notable depth, with thickness on top and at flanks. Loins should be very broad and thick; shoulders should set well back and be smoothly covered, and crops be full and well arched. The rump should be long, broad, and level	20
Legs: Should be short, well set apart, and be covered with clean, white hair, with no wool below hocks and knees. The hind legs should be flat and deep below hocks. Pasterns should be strong and not show weakness, supporting the body well	10
Feet: Symmetrical, squarely placed when in repose, and hoofs black in color	5
Fleece: Should cover the body completely to behind the poll and ears and down to knees and hocks. Under part of the body should be well covered. In mature animals should be not less than 3 inches long for annual growth and be compact and of medium wool class. Rams should shear at least 12 pounds and ewes 8, when in mature form, to be desirable representatives of the breed	20
Total	100

Objections: Scurs on the head, black spots on the head, flesh-colored or spotted skin about the nostrils, hair about the thighs or kemp on the body, reddish or sandy hair on head or legs, lack of wool on under part of body.

Disqualifications: All male lambs shall be ineligible to registration if having scurs or horns exceeding 1 inch in length.

THE TUNIS.

The origin of the Tunis is lost in the mists of antiquity. Sheep have existed in an improved form in northern Africa for centuries, and the breed under discussion is said to have roamed the hills of Tunis and part of Algeria prior to the Christian era. They are sometimes called the "fat-tailed" sheep, but other breeds, perhaps not so well known, also possess this character

The first of these sheep to come to this country were those brought over by Gen. William Eaton, who was United States consul at Tunis. He received special permission from the Bey and shipped 10 head upon the man of war *Sophia*. Only one pair survived the voyage, and

these found a home upon the farm of Judge Richard Peters, of Belmont, near Philadelphia. This importation took place in 1799. About 1807 or 1808 Commodore Barron imported some into the District of Columbia, and in 1825, 13 head were landed at New York City.

Judge Peters bred these sheep for 20 years upon his farm, and they attained great popularity about Philadelphia for the quality of their mutton. It is said that the demand for lambs for eating purposes was so great that it actually hindered the development of the breed. However, flocks were eventually established in the South in the States of North and South Carolina, Virginia, and Georgia, where the breed also met with great favor, and increased in numbers until the Civil War, when they were almost entirely destroyed. In the North the sheep remained very popular until the fine-wool craze struck the country, during which time mutton qualities were entirely subordinated to wool. As the Tunis can not successfully compete with the Merino in the production of wool, it was eliminated from the race, and nothing more was heard of the breed until the Columbian Exposition in 1893. At this show a pen of Tunis sheep from South Carolina, descendants of those that had escaped destruction during the war, was exhibited, and a great deal of interest was manifested in the breed.

J. A. Guilliams, of Roachdale, Ind., purchased some of these sheep, and the next year he purchased 10 head of Col. M. R. Spigener, of Columbia, S. C., who had a flock of about 30 head, evidently the only one remaining in the South. Charles Rountree, of Yountsville, Ind., became interested in the breed about the same time, and his flock has since become famous. He has sold one lot, consisting of two rams and six ewes, to William Cooper & Nephews, who exported them to New Zealand. The American Tunis has been improved by an infusion of Southdown blood, and the fat tail of the original has been greatly reduced.

The fact that the Tunis has given such good results in the North and has survived through all the hardships with which it has met in the South speaks well for its adaptability and hardiness. But, while they have been popular in the North and have given excellent results, there can be little doubt as to their special adaptability to the Southern States. They are an especially hardy breed, largely able to take care of themselves, and the warm climate does not affect them adversely, as it does some other breeds. The ewes are very fertile and will mate at almost any season of the year. Because of their superior breeding qualities the ewes should be especially desirable for the production of early spring or hothouse lambs, and the South is a good field for this industry. Crossed upon other breeds the Tunis produces lambs of good mutton qualities, and they have thus wrought

marked improvement in the piney-woods sheep of the South wherever used. The largest number of purebred flocks are to be found in Indiana.

In Arizona, at the agricultural experiment station, Tunis bucks proved superior to those of other mutton breeds, notably the Oxford, Shropshire, Dorset, and Hampshire, for crossing upon the native ewes. They had excellent range qualities, were very prolific, and exhibited a tolerance to heat and a resistance toward the sheep bot fly unequaled by any of the other breeds. The rams were active, repelling the bot flies, and were more fertile than those of other breeds under the conditions mentioned. The cross resulted in larger and earlier lambs and a longer staple of wool, though not as fine as the native Merino ewe. The Tunis seems especially adapted to the climatic conditions of this region, which resulted in the mortality of a large number of the rams of other breeds, and bids fair to become quite popular in this State.

The Tunis is a rather small, rangy, early-maturing breed, rams weighing about 150 pounds in breeding condition. Ewes should weigh 120 pounds or better. The type of this breed is not very well fixed. Both sexes are hornless; the head is covered with short hair, tawny, yellow-brown, or brown and white in color. The ears are large and broad and pendulous.

In mutton qualities, the Tunis has a fair form, though mature sheep are somewhat patchy about the tail head, and the mutton is of good quality. The tail is characteristically broad and fat, it having been used for a storehouse where fat was stored in times of plenty to carry the animal over periods of famine. The fleece is of the medium wool type, compact and of fair quality, though it varies somewhat in color. A good fleece should weigh from 7 to 9 pounds. It usually grades quarter blood and three-eighths blood combing.

The breed has been criticized for being somewhat light in the leg of mutton and patchy about the tail head when mature.

The American Tunis Sheep Breeders' Association organized June 6, 1896, at Fincastle, Ind. The headquarters of the breed are at Crawfordsville, Ind. They have registered 2,530 head of sheep up to January 1, 1914. The following is the scale of points adopted by this association:

	Points.
Blood: Imported from Tunis, or a perfect line of ancestors extending back to the flock owned and bred by Judge Richard Peters, of Pennsylvania	20
Constitution: Healthful countenance; lively look; head erect; deep chest; ribs well arched; round body, with good length; strong, straight back; muscles fine and firm	15
Fleece: Medium length; medium quality; medium quantity; color white, sometimes tinctured with gray; evenness throughout	10
Covering: Body and neck well covered with wool; legs bare or slightly covered; face free of wool and covered with fine hair	10

	Points.
Form: Body straight, broad, and well proportioned; small bone; breast wide and prominent in front; tail should be docked short	12
Head: Small and hornless, or nearly so, tapering to end of nose; face and nose clean, brown and white in color; ears broad, pendulous, and covered with fine hair, brown to white in color	10
Neck: Medium in length, well placed on shoulders; small and tapering	5
Legs: Short; color, brown and white (wooled below the knee, not objectionable)	6
Size: In fair condition, when fully matured, rams should weigh 150 pounds and upward; ewes, 120 pounds and upward	6
General appearance: Good carriage; head well up, quick, elastic movements showing symmetry of form and uniformity of character throughout	6
Total	100

THE WELSH MOUNTAIN.

A number of different types are included under the name of Welsh Mountain sheep. Upon the highest hills of Wales the original sheep exists, but in other sections crosses have been made with the Leicester, Lincoln, Cheviot, Black-faced Highland, and Radnor forest breeds. The crosses with the Lincoln and Leicester have taken place mainly upon the fertile lowlands, and a larger earlier maturing sheep has resulted. This has been an advantage where the sheep are fed roots or other feed additional to their pasture, but where this is not practiced the cross has resulted disastrously because of the consequent lessening of the ability to rustle for itself.

The Black-faced Highland cross resulted in an increase in weight and amount of wool produced. The color of the wool was changed to yellow. The Cheviot cross produced similar characteristics, but resulted in a sheep too large for mountain grazing.

Upon the hilltops these sheep are very small, but upon the eastern slope of Berwyn and Merionith Hills they are larger and of a better type and possess much finer wool. It is said that a dark-faced type exists in Radnor, western Montgomeryshire, and parts of Merionith. The great difference in size and appearance may be accounted for by the different types of sheep used in crossing. They weigh from 32 pounds upward, and the mutton, with that of the Blackface and Southdown, is the best on the London market. The favorite type has a white face, though rusty brown, yellow, speckled, and gray faces may be found.

The poll is clean, but sometimes a tuft of wool is present upon the ram's head. The head is small, carried high, the neck is long, the shoulders somewhat low; the girt is small; and the sides are flat. The rams have gracefully curved horns, while the ewes are usually hornless. The wool of the better type is of excellent quality, the famous Welsh flannels, shawls, etc., being made from it. Fleeces are said to weigh from 2 pounds upward, depending upon the type.

The ewes usually drop but one lamb, but they are excellent mothers. The mountain flocks are usually brought down to the lowlands from November until April.

About 70 head of Welsh Mountain sheep have been imported to this country by the Beach estate, of Elmwood, Conn. These sheep were brought over in March, 1902. This is the only flock in the country at the present time. They seem to have given satisfaction to their owners, who report that the lamb crop averages about 130 per cent, that the average weight of fleece is 4¼ pounds, and that the mutton is of the choicest meat produced. Fair quality of wool grades quarter blood combing.

The Welsh Mountain Sheep Breeders' Association of Great Britain organized in 1905, and they published the first volume of their flock book the following year. There is no American association.

THE EXMOOR HORN SHEEP.

The Exmoor Horn is another old breed and have ranged the Exmoor and Brendon Hills for centuries. The Report of the Agriculture of Devon, 1808, describes them as being extraordinarily hardy and very active in searching for food. They were also said to have been narrow and flat sided in the early days, and some individuals were polled.

Youatt, 1837, says that the breed owes much to the cross with the new Leicester with respect to increased size, heavier fleece, and earlier maturity.

In 1844, the Exmoor Horn and the Dartmoor were reported as the principal mountain breeds of the West of England. The Exmoor was somewhat the smaller of the two, and the rams were distinctive in having a beard much resembling that of a goat. These sheep have been exhibited at the Royal, Bath and West of England, Somerset, and Devon County shows for a great many years. In a report of the Bath show in 1860 the breed was greatly admired for their symmetrical proportions, quality of flesh and wool, and for their adaptability to mountain districts. In Somerset and Devon Counties, the sheep are commonly raised upon the mountains and removed to the lowlands for fattening purposes.

In 1910, Wm. Cooper & Nephews imported a ram and three ewes of this breed for Frances Evans, Sugar Grove, Ill. The next year they imported eight yearling ewes and a ram for the same person. Other importations have followed.

The Exmoor is a small, white-faced, horned breed, noted for its activity and hardiness. The body presents a rotundity of form very pleasing to the eye. They much resemble the Southdowns, both in build and easy fattening qualities. They are, however, a trifle larger and carry a heavier fleece, especially upon the belly.

FIG. 1.—WELSH MOUNTAIN RAM.

FIG. 2.—WELSH MOUNTAIN EWES.

FIG. 1.—EXMOOR RAM.

FIG. 2.—EXMOOR EWES.

FIG. 1.—RYELAND RAM.

FIG. 2.—RYELAND EWE.

FIG. 1.—KERRY HILL RAM.

FIG. 2.—KERRY HILL EWES.

The wool is considerably longer and coarser than that of the Southdown. The mutton is of exceptional quality. The ewes are quite prolific and they are good mothers, though they are said to give less milk than the old type.

The importers speak very favorably of the breed and think that as soon as it becomes better known it will be popular in the hilly sections of this country.

The Exmoor Horn Sheep Breeders' Society of Great Britain was founded in 1906, and this society is doing considerable work in placing the breed before the public.

THE RYELAND.

The Ryeland derived its name from the tract of land in Herefordshire along the River Wye upon which rye had grown for a great many years. The breed was for a long time an important one, and it was especially prominent in the live-stock industry of the midland counties at the beginning of the last century, when it is said that Herefordshire alone pastured some 500,000 head of the breed, and there were also flocks in Monmouthshire, Gloucestershire, Shropshire, and Staffordshire.

The improved breeds, notably the Shropshire, crowded the old Ryeland out, and at one time it was thought that they were extinct. Much of the credit for preserving the breed is due to a Mr. Shepherd, of the district of Malvern.

The old Ryelands were a small, white-faced, polled breed, having considerable wool about the eyes. They were extremely hardy and capable of thriving upon scanty fare. The fleeces were of excellent quality, being finer than those of the Southdowns, but they rarely exceeded 2½ pounds in weight.

Some authors held that the breed was of foreign origin, because of the practice of sheltering and feeding at night, which is unusual with other native sheep in this district. However this may be, a Merino cross was made when the latter sheep were introduced into England, but failure resulted from the experiment. Leicester blood is also said to have been introduced between the years 1800 and 1827, with accompanying length of fiber and increased size. For almost a century there has been no crossing, and the type is now fairly well fixed.

While the breed is again on the ascendancy, its distribution in England is by no means widespread. Wallace says that in 1903 there were about 30 flocks in existence, while in 1907 this number had increased to 200. They are to be found principally in Hereford and Brecknockshire, and in fewer numbers in Monmouth, Gloucester, and Worcester Counties.

Ryelands were first brought into the United States by George McKerrow, of Wisconsin, for the Colorado Experiment Station.

In the fall of 1907 one ram and three ewes were brought over, and three years later three more ewes were imported. They were crossed with Southdowns and Shropshires, the ewes proving remarkably good milkers and the lambs making rapid gains. They are exceptional mothers, being better than the more common mutton breeds in this respect. They are very fertile, producing many twins and triplets and have averaged a very high percentage of lambs; namely, 155 per cent. This percentage has been obtained from a very small number, hence it should not be overrated, as more extensive tests may not result as favorably.

The Southdown cross is said to have resulted in a very fine type of mutton sheep, being larger than the Southdown and possessing more spring of rib.

This breed is sometimes known as the White-faced Shropshire. The two breeds have considerable in common, and it is sometimes claimed that Ryeland blood entered into the development of the Shropshire. They are a hardy, compact breed, possessing great spring of rib. They thrive upon scanty pasture and fatten readily. They are claimed to be especially desirable for the production of early lambs, as the offspring are usually fat when dropped, but they have been criticized for this very property, as the carcass of a Ryeland, even under 1 year of age, is said to contain too great a percentage of tallow.

The head is a dull white color, covered with wool to the eyes and having a strip on either side of the face. The breed is characteristically strong at the juncture of the shoulders and neck. Mature rams in breeding condition should weigh from 200 to 225 pounds and ewes from 160 to 175 pounds.

The Ryeland breed is rather attractive and should find admirers in this country.

The fleece of the new Ryeland is considered heavier than that of the old prototype. The wool is of the combing class and resembles that of the Oxford Down, good fleeces weighing from 10 to 12 pounds. The quality is excellent, and this wool vies with that of the Dorset for premier place at the Royal. Upon the American markets it would usually grade as quarter and low quarter blood combing.

THE KERRY HILL.

The Kerry Hill is a Welsh breed of comparatively recent origin. Their home is in the Kerry Hills, which extend eastward and westward for 15 miles through the parish of Kerry, in Montgomeryshire. The region around about is famous for its improved live stock, as Shropshire sheep and Hereford cattle took form as breeds in neighboring shires.

The foundation breed was described in 1809 in the Agricultural Survey of Wales as the only breed that produced perfect wool, the

other Welsh breeds having more or less kemp. They had generally white heads; large, woolly cheeks; white, bunchy foreheads; were hornless; and had a beaver-like tail.

In 1840, Thomas Halford says the sheep were larger and heavier wooled than the pure Welsh sheep. The wool upon the body was fine, but lower down it was so coarse that it was always separated and sold at a lower price. Their faces and legs were often speckled with dark spots.

About this time rams were brought in from Knighton to use upon the flocks. These were of the Clun Forest breed with a very slight Shropshire cross. About 1855 the Kerry farmers ceased to use the foreign blood, as they could secure better rams by exchanging among themselves.

The breed now is undoubtedly a distinct one. The type is well fixed, and the sheep are quite uniform. It has been greatly improved by the use of root crops, as has many others, but it can no longer be spoken of as a mountain breed, in the sense that it is able to survive without artificial feeding. This breed was first recognized as distinct by the Royal Show at Lincoln in 1907.

Outside of Montgomeryshire, registered flocks can be found in Radnor, Hereford, Salop, Worcester, Durbright, and Cheshire. The ewes are also quite extensively used in crossing with rams of the Down breeds. The lambs produced are very popular for the fat-lamb trade. The annual fair and sale held at various places under the auspices of the breed association the last Friday in September is one of the best sheep shows in Britain. As many as 8,000 sheep have been exhibited at this fair. The breed is described as follows:

They are of medium size and have a rather dense covering of medium wool. They are broad of body, of considerable length, lacking slightly in depth, but are low to the ground. They are quiet and submit readily to folding. The mottled appearance of the face is very characteristic, and the mottles are very clearly defined.

In July, 1909, F. H. Neal, of Lucan, Ontario, Canada, imported three yearling ewes and a ram of the Kerry Hill breed. The experiment station of the University of Wyoming conducted some experiments with these sheep, and they reported the breed as being vigorous and hardy, but that they were light shearers and did not show evidences of superior merit from the mutton standpoint. Fleeces should weigh from 7 to 8 pounds and the wool grades quarter blood and low quarter blood combing.

The Kerry Hill Sheep Breeders' Association of Great Britain published their first flock book in 1894. This organization has done much toward placing the breed before the public. For a time the book was not published, but in 1899 it again appeared. There is no American association.

THE LONK.

To the Lonk belongs the distinction that its ancestors can not be traced from time immemorial. Youatt, Lowe, and the other old writers failed to mention it. Some claim to see in the Penistone sheep mentioned by Youatt the present Lonk breed, and indeed there seems to be some relationship, as the present Penistone breed has characteristics similar to those of the Lonk.

About 50 years ago "The Druid," a famous writer upon live-stock subjects in Great Britain, wrote an account of this breed, which seems to be the oldest in existence.

The name Lonk is said to be derived from the coarse herbage growing upon the moorlands of North Lancashire, West Riding, of Yorkshire, and part of Derbyshire, of which places this breed is native. It is also claimed that the term is a corruption of Lancashire. The district about Clitheroe and Skipton is one of the breed's special strongholds.

The Lonk is a large mountain breed, somewhat resembling the Black-faced Highland. It is heavier, longer, more upstanding, and has a larger head. The fleece is shorter, denser, finer, and somewhat heavier than that of the Black-face.

The face and legs are black and white, the spots being very distinct. Brown is objectionable. There should be no wool upon the face and legs, but a small tuft upon the forehead and a fringe upon the hind legs. However, the wool comes up close behind the horns, which are to be found in both sexes. Fleeces are reported from $4\frac{1}{2}$ to 11 pounds in weight. The wool grades quarter and low quarter blood combing in America.

This breed is said to be not as hardy as the Black-face, and when used in crossing upon the latter decreased constitution resulted.

Wm. Cooper & Nephews imported in 1908, for the Bitter Root Ranch, at Hamilton, Mont., 50 ewes and 5 rams of this breed. In 1911 three more rams were imported for the same company. These sheep are said to have done fairly well, but they are unsuited to range conditions, as it is impossible to herd them. The above-mentioned company disposed of their stock for this reason.

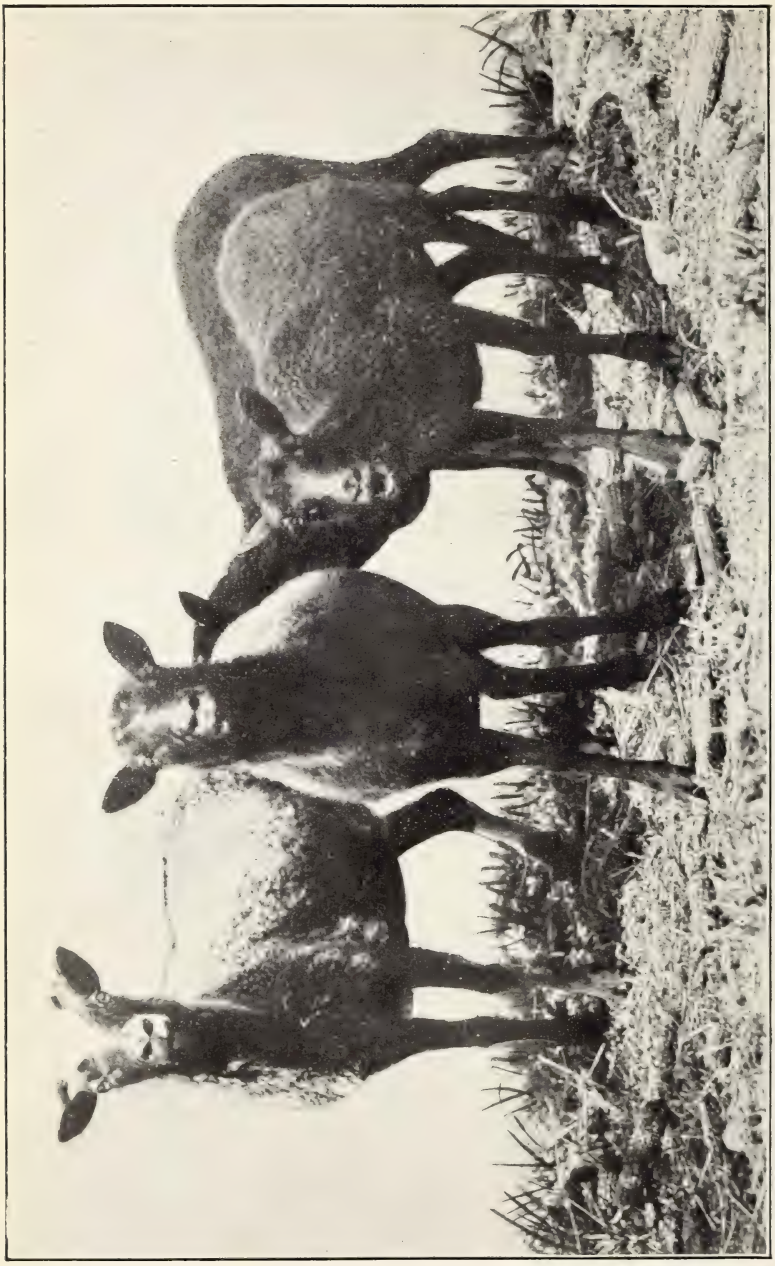
The Lonk Sheep Breeders' Association and Flock Book Society of England issued the first volume of their flock book in 1905. They claim for the breed that it is especially adapted to mountainous districts. There is no American association.

THE SHETLAND.

This breed, if it may be called one, comes from the Shetland Islands, which are located northeast of Scotland. It is said that the pure Shetland exists only upon the islands of Foula and Papa Stour. They are a very small breed, weighing from 30 to 40 pounds when

FIG. 1.—LONK RAM.

FIG. 2.—LONK EWE.



SHETLAND EWES.

FIG. 1.—LEICESTER RAM.

FIG. 2.—LEICESTER EWE.

FIG. 1.—COTSWOLD RAM.

FIG. 2.—COTSWOLD EWE.

mature, and they are noted for their excellence of mutton and fineness of wool. They are also very hardy, especially those that have access to the seaweed. It is a strange thing that these sheep know when the tide recedes even though they may be several miles inland. There is an old legend that is still credited to a certain extent upon these islands to the effect that there is a worm in the sheep's foot that turns as the tide recedes.

Not all individuals have horns, but this type is preferred. The tail is short and pointed at the end. In color they may be black, white, brown, or almost any combination of these. The average weight of fleece is about 2¼ pounds. The sheep are never shorn, but in the spring the wool loosens from natural causes and rises up through the coat of hair that also covers the animal. The sheep are driven into "crues," or "punds," as they are called, about once a week, from May 15 to the last of June, and "plucked." There may be more than a week's difference in the loosening of the wool on the sides from that on the back. The plucking process causes no pain and is much superior to shearing in the case of these sheep. The latter process would remove the hair which acts as a protection to the animal and which would be objectionable in the wool. Shearing would also result in the cutting of the new wool, another undesirable feature.

The fleeces of these sheep are used in the manufacture of hosiery and for the famous Shetland shawls.

A great deal of crossing, involving Black-faced Highland, Leicester, and Cheviot blood, has taken place upon the islands, and there is danger of the breed being crossed out of existence.

Wm. Cooper & Nephews made an importation of 17 head of Shetlands for W. W. Burch, of Michigan. R. S. Blastock, while purchasing sheep in England in 1910 for Mr. L. V. Harkness, of Kentucky, was presented with three ewes and a ram. These were taken to the Walnut Hall estate at Donerail, and they are slowly increasing in numbers.

The specimens brought to this country were largely black and brown, with occasional white markings. They are deer-like in appearance and are very timid, it being very difficult to closely approach them. They make a beautiful sight in a park and are suitable only for such purposes in America. They have fittingly been called a "toy" sheep.

THE LEICESTER.

Even though the English Leicester does not exist in the United States in the pure form, any treatise upon the breeds of sheep would be incomplete without reference to this one. They were one of the first of the modern improved breeds of live stock, and the influence the Leicester has had in developing the other breeds is almost incom-

prehensible. Their improvement is noteworthy, not only because they were later able to directly impart their superiorities to other breeds, but also because principles were established in their development that have since been of inestimable value in establishing and improving other breeds.

To Robert Bakewell, of Dishley Hall, near Loughborough, Leicestershire, belongs the honor of establishing this breed, and he has fittingly been called the "father" of improved live stock. Bakewell was a rather quiet man, and there are stories about a "black ram" that he used in his breeding operations and of other secretive proceedings that he resorted to. It is much more likely that he used the long-wool sheep of his district, and especially the Old Leicesters, which have been described as being a long, thin, flat-sided, slow-maturing sheep possessing large bones and rough legs and generally lacking in quality. Their fleece was from 12 to 15 inches long and heavy, and this had been the chief consideration in their development. Bakewell began breeding in 1755 for improved form, better feeding qualities, earlier maturity, and reduction of bone and offal. In other words, he bred for more mutton and paid little or no attention to wool. He bred the "best to the best," to use his own expression, and practiced inbreeding whenever he deemed it necessary. He was an exceptional judge of live stock, and he constantly mated animals together of his approved type until he had succeeded in establishing a breed that would almost invariably hand down their characteristics to their offspring. To be brief, he fixed the type.

However, with the improvements there were also some weaknesses that manifested themselves in the New Leicester. These were more delicacy of constitution, impaired milking qualities, a lighter fleece, and decreased prolificacy. At this time, however, these were not regarded as of very great importance.

For a time Bakewell had trouble in convincing the public of the desirability of his breeding stock, but later these sheep became very popular and spread all over England. The Dishley Society was founded about 1790 for advancing the interests of the breed, and it greatly aided in further establishing the Leicester. This society preferred to rent their rams. After they were established the Leicester became very popular for crossing upon the other breeds, as they were prepotent to such an extent that the cross usually possessed most of the good qualities of the breed.

The mutton was never of the highest quality. It was coarse-grained and contained too much fat, which was deposited externally instead of being mixed with the lean. As the demand at that time was for quantity rather than quality, this had little effect upon the popularity and distribution of the breed. Since then the importance

of quality has been emphasized, and to-day the purebred Leicester is no longer common in England. Flocks are still to be found, however, in East and North Yorkshire, Cheshire, Cumberland, Durham, and Leicestershire. Because of their value in crossing and the important part that they have played in establishing the ovine breeds, it is to be hoped that they will not be entirely lost in crossing upon other breeds.

The Border Leicester is sometimes considered a type of the English or New Leicester, but there are differences enough to justify it being classed as a distinct breed, and this has been done in Britain. The origin of this breed is debatable. In 1767 George and Matthew Culley, friends of Bakewell, established themselves upon a farm at Fenton, near Wooller, among the Cheviot Hills. They took some of Bakewell's improved stock with them, and some authorities claim that this was crossed upon the Teeswater sheep in the establishment of the new breed, while others claim that the Cheviot entered as a foundation stock. At any rate, the breed is now established in Northumberland, Yorkshire, Durham, and Lothian.

The principal differences between the Border and Bakewell types are as follows: The head of the former is clean cut, covered with short white hair, and entirely free from wool. The face is white and the ears are carried erect. The features of the latter are not so sharply defined; they are slightly wooled about the top of the head, and the wool carries down farther upon their legs. Their face has a bluish tinge, and they are not so neat about the middle as the Border type.

The improved mutton qualities of the Border Leicester have greatly aided it in replacing the older type. Its adaptability to conditions in northern England and southern Scotland have caused it to be called the "mainstay of farming" in the border counties. The rams are very popular here for crossing upon Cheviot ewes.

Bakewell, or Dishley, Leicesters were introduced into America before the Revolutionary War. Records show that Washington used rams of this breed in improving his flock at Mount Vernon, which at one time amounted to 800 head. Purebred Bakewell ewes were also brought over, for when Washington's flock was dispersed in 1802 George Washington Custis purchased three of these animals. The Arlington Longwools, famous in early American sheep history, were developed by the latter gentleman, who followed Washington's plan of breeding the "Persian" sheep of the neighborhood to improve Leicester rams. The Arlington flock made steady progress until eclipsed by the Merino. After the advent of the latter they were no longer bred pure to any considerable extent. Some of the sheep of the South, especially the Tennessee mountain variety, resemble these, and it is not improbable that they have descended from them.

The date of the first importations of Border Leicesters is unknown, both types of the breed having been registered by the same association, and no mention was generally made of the type imported. During recent years importations have been very rare. Practically all of the Leicesters in America to-day are of a modified border type. This modified American type is considered by many sheepmen to be superior to either the English or Border Leicester.

The breed is much more popular in Canada, and especially in Ontario, than in the United States. Michigan, New York, Pennsylvania, and Vermont have the largest number of registered flocks. At least one prominent sheepman of the West is securing good results by crossing Leicester rams upon range ewes.

The Leicester is the smallest of the long-wool breeds. Rams usually weigh from 225 to 275 pounds and ewes from 175 to 225 pounds. The body is neat, showing great spring of rib, causing apparent lack of depth; the mutton is not of especially high quality. The fleece is of good length, the ringlets are more pronounced than in any other breed, and the fiber is of good quality. Ten to twelve pounds is a good average clip for a flock, and the wool usually grades braid and quarter blood combing. The fecundity and early maturing qualities of the Leicester are only fair. None of the long wools are decidedly superior in these respects. The Leicester is one of the few breeds of sheep that is acknowledged to have been improved in America, but the mutton qualities could still be considerably improved. The carcass is too large when mature and the quality is not what might be desired. They are also more upstanding than is desirable.

The Dishley Society for the promotion of the Bakewell Leicester was one of the first organizations founded for the purpose of promoting a breed. Its existence has been charged as due entirely to selfish motives, but whether or not this was the case, it aided in establishing these sheep.

At the present time in England there are separate societies for registering and promoting the Border and English types, but in America one organization has registered both. It is known as the American Leicester Breeders' Association and was established in 1888. Up to January 1, 1914, 15,913 sheep have been registered. The secretary of the association is located at Cameron, Ill. There is no scale of points, and none could readily be devised covering both types.

THE COTSWOLD.

For several centuries certain sheep of Gloucestershire and parts of Hereford and Worcester have borne the name of Cotswolds. Some authors claim that they derived their name from the region and others claim that the hills derived their name from the sheep. The derivation of the word is from "cote," a sheep shelter,

and "wold," a stretch of upland. It seems that in the early days the Cotswold was a fine-wooled breed, greatly famed for the quality of the wool. Later the sheep that bore the name were a large, coarse-wool breed, of great vigor and constitution. These latter sheep were undoubtedly the stock from which the present Cotswold breed has been developed, but whether the fine-wooled sheep spoken of were more remote ancestors is a question that has not been satisfactorily answered. There are stories that the sheep of this region furnished wool for the Romans 2,000 years ago, but there is probably no more similarity between the modern Cotswolds and these sheep than between the other modern breeds and the ancient types from which they sprung.

The improvement of the Cotswolds began about 1780 by the introduction of Leicester blood, and from this time up until 1820 few, if any, flocks escaped an infusion of Bakewell blood. This new blood reduced the size and constitution of the original Cotswolds, but it improved them in form and quality and introduced earlier maturing characteristics. For the last 75 years the Cotswold breed has been kept comparatively pure, but the breed was not awarded a distinct class at the Royal Show until the Battersea meeting of 1862. The Smith family, of Bilbury, and the Hewers, of North Leach, were prominent early breeders of Cotswolds.

In Great Britain the Cotswold is not common outside of its native district. In foreign countries it has found favorable environs, especially in parts of Canada and the United States. Cotswolds have also been exported to Australia, New Zealand, France, Germany, and Russia.

Mr. Christopher Dun, of Albany, N. Y., made an importation of Cotswolds in 1832. Other importations followed, large numbers of these sheep being brought over during the next half century. Fewer importations have been made during the last 25 years.

Purebred Cotswolds have been registered from almost every State in the Union. Formerly there were a good many flocks in the East, but the breed does not do especially well in this section and they have been largely replaced by other breeds. In the Middle West, Wisconsin has some notable flocks, and this State is one of the strongholds of the breed. In the far West, Oregon and Utah are famous for their excellent flocks. In the Willamette Valley in the former State, Cotswolds are produced that equal in excellence those of the native hills of England. This is the breeding ground for large numbers of rams that are used for crossing upon the Merino ewes of the range, especially in Montana and Idaho. The half-blood sheep are considerably larger than the Merino, and they produce a longer fleece. It is largely the range demand that has caused the breed to become so popular in America.

With the exception of the Lincoln the Cotswold is the largest breed of domesticated sheep. Rams weigh from 300 to 350 pounds and ewes from 200 to 250 pounds. They have white, light-gray, or spotted faces, have a large foretop, and they carry their heads very erect. Their mutton is of fair quality, though the admixture of fat and lean is not as good as in the Down breeds. The feeding qualities are very good, and they give good gains for the amount of feed consumed, but if denied feed or care they become very unsightly. The fleece is somewhat open, the wool is in ringlets of good length and quality. Fleeces should average about 12 pounds of braid or low quarter blood combing wool. In fecundity and early maturing qualities the Cotswolds are about medium.

The fleece of this breed is more open than is desired and there is a tendency for the poorer individuals to be ewe necked and low in the rump. The quality of the mutton could also be improved. Another criticism is that under unfavorable conditions the Cotswold becomes very unsightly.

The Cotswold Sheep Society of England was organized in 1892. The American Cotswold Sheep Society was organized at Chicago in 1878. Up to January 1, 1914, they have registered 74,455 sheep, but one other American association having surpassed them in the number of sheep on record. The headquarters of the association are at Waukesha, Wis. The following is the standard of excellence and scale of points for Cotswold rams and ewes:

FOR COTSWOLD RAM.

	Points.
Head not too fine, moderately small and broad between the eyes and nostrils, but without a short, thick appearance, and in young animals well covered on the crown with long, lustrous wool	8
Face either white or slightly mixed with gray, or white dappled with brown	4
Nostrils wide and expanded; nose dark	1
Eyes prominent, but mild looking	2
Ears broad, long, moderately thin, and covered with short hair	4
Collar full from breast and shoulders, tapering gradually all the way to where the neck and head join. The neck should be short, thick, and strong, indicating constitutional vigor, and free from coarse and loose skin	6
Shoulders broad and full, and at the same time join so gradually to the collar forward and chine backward as not to leave the least hollow in either place	8
Fore legs: The mutton on the arm or fore thigh should come quite to the knee. Leg upright, with heavy bone, being clear from superfluous skin, with wool to fetlock, and may be mixed with gray	4
Breast broad and well forward, keeping the legs wide apart; girth or chest full and deep	10
Fore flank quite full, not showing hollow behind the shoulders	5
Back and loin broad, flat, and straight, from which the ribs must spring with a fine circular arch	12
Belly straight on underline	3
Quarters long and full, with mutton quite down to the hock	8
Hock should stand neither in nor out	2

	Points.
Twist or junction inside the thighs, deep, wide, and full, which, with a broad breast, will keep the legs open and upright	5
Fleece: The whole body should be covered with long lustrous wool	18
Total	100

FOR COTSWOLD EWE.

Head moderately fine, broad between the eyes and nostrils, but without a short, thick appearance, and well covered on crown with long, lustrous wool	8
Face either white or slightly mixed with gray, or white dappled with brown	4
Nostrils wide and expanded; nose dark	1
Eyes prominent but mild looking	2
Ears broad, long, moderately thin, and covered with short hair	4
Collar full from breast and shoulders, tapering gradually all the way to where the neck and head join; the neck should be fine and graceful, and free from coarse and loose skin	5
Shoulders broad and full, and at the same time join so gradually to the collar forward and chine backward as not to leave the least hollow in either place	8
Fore legs: The mutton on the arm or fore thigh should come quite to the knee; leg upright with heavy bone, being clear from superfluous skin with wool to fetlock, and may be mixed with gray	4
Breast broad and well forward, keeping the legs wide apart; girth or chest full and deep	10
Fore flank quite full, not showing hollow behind the shoulder	4
Back and loin broad, flat, and straight, from which the ribs must spring with a fine circular arch	12
Belly straight on underline	5
Quarters long and full, with mutton quite down to the hock	8
Hock should stand neither in nor out	2
Twist or junction inside, the thighs deep, wide, and full, which, with a broad breast, will keep the legs open and upright	5
Fleece: The whole body should be covered with long, lustrous wool	18
Total	100

THE LINCOLN.

The Old Lincolns were mentioned as an established breed as early as 1749. The modern type of this breed resulted from crossing Leicester rams upon the Old Lincoln ewes. The breed was recognized by the Royal Agricultural Society as distinct in 1862. Their home is in Lincolnshire, in northeastern England, the east side of the county touching the sea.

The Old Lincolns were the largest breed of sheep in Britain. They were coarse and had white faces and legs and heavy heads and necks. They lacked spring of ribs and were low in the back. They produced a very heavy, oily fleece, though their bellies and legs were said to have been almost bare. They were slow at reaching maturity and did not feed very well. The Leicester blood improved the symmetry and feeding qualities very greatly; it also induced early maturity. The Dudding family, of Riby Grove, Great Grimbsy, Lincolnshire,

bred Lincolns for about 175 years. This famous flock was dispersed in July, 1913.

Until about 1850 little attention was given the Lincoln outside of its own locality. Since that time it has spread over Lincolnshire, Rutland, and several neighboring counties. The breed has also become famous in Australia, New Zealand, South America, South Africa, Canada, and the United States. Crossed upon fine-wool sheep of Merino blood, the Lincoln has given especially favorable results in Australia, New Zealand, and South America. The large body and long fleece are apparent to such an extent in the cross that a very profitable lamb results. By continuing this crossing the Corriedale breed has been established in the former countries. The Lincoln is also bred pure in these countries, but the type is somewhat different from the English Lincoln.

Old-type Lincolns are said to have been brought to America previous to 1796. In 1825 A. A. Lawrence, of Massachusetts, made an importation of 10 head of the improved type, and several other importations followed shortly afterwards. A Lincoln ram was recently imported to Oregon from New Zealand. The type varied considerably from that of the English breed.

The Lincoln is adapted to fairly fertile and arable farming sections, as they do not thrive upon broken pasture. They also require a fairly humid climate for their greatest development, which accounts for their importance in Oregon. In this State they attain a measure of excellence not excelled by those of England. The Willamette Valley is the breeding grounds for Lincoln rams for use upon the range, and the demand is greater than the supply. Ohio and Michigan are also noted for their purebred flocks. In Oregon and Montana especially, and in some of the other States to a lesser extent, a great many cross-bred Lincoln fine-wool lambs are produced. The lambs produced by this cross are exceptionally profitable and are very popular upon the market.

Taken as a breed, the Lincoln is the largest of all English sheep, but individuals of the Cotswold breed may equal them in size. The rams should weigh from 250 to 375 pounds and the ewes from 225 to 275 pounds. Their mutton is only of fair quality, it being somewhat coarse and not as palatable as that of the Down breeds.

As the Lincoln is the heaviest breed, it also produces the heaviest fleece of all the mutton breeds. The staple is long (samples being reported that measured 21 inches), very lustrous, and hangs together in distinct staples. Fleeces have been reported that weighed 32 pounds washed wool, but they usually range from 12 to 16 pounds, with 14 pounds as a good average for a flock. The commercial grades of this wool are braid and low quarter blood. In the Northwest fleeces are sometimes allowed to grow for longer periods than one year,

FIG. 1.—LINCOLN RAM.

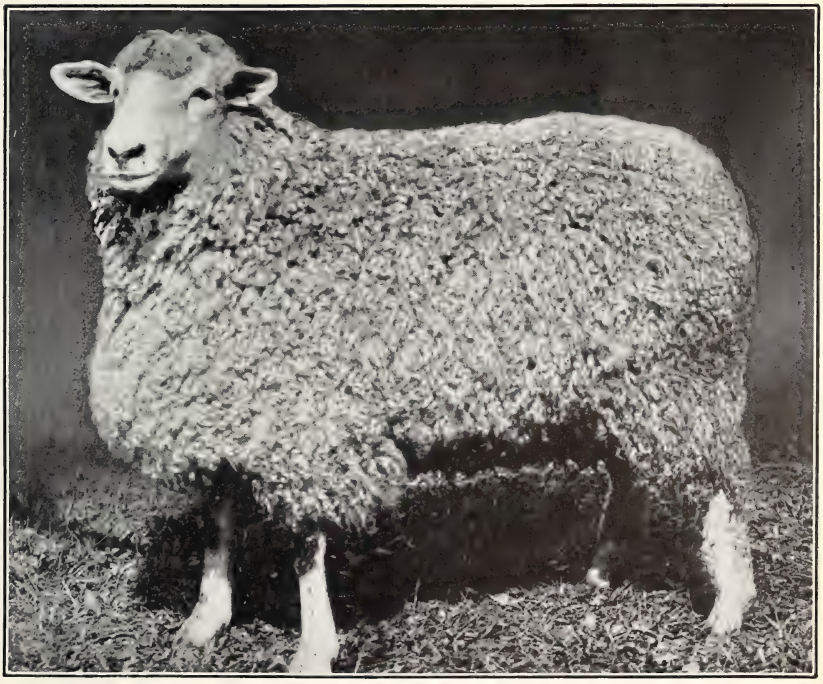


FIG. 2.—LINCOLN EWE.

FIG. 1.—ROMNEY MARSH RAM.

FIG. 2.—ROMNEY MARSH EWE.

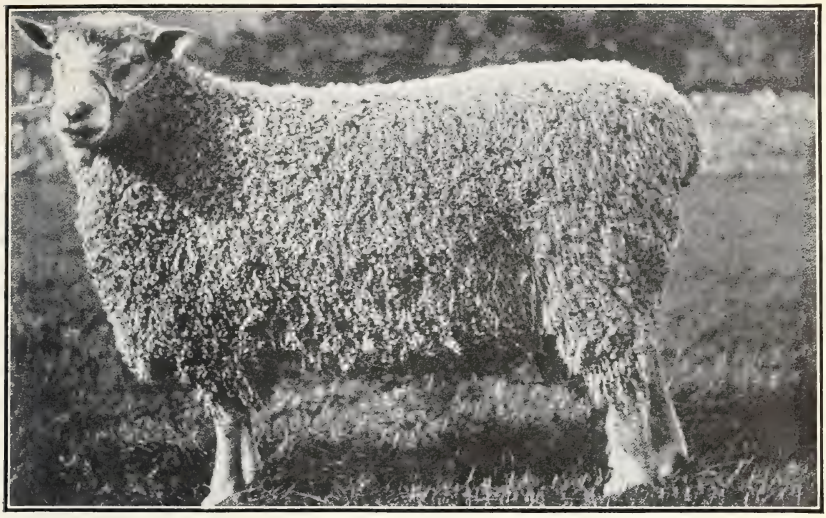


FIG. 1.—WENSLEYDALE RAM.

FIG. 2.—TRIO OF WENSLEYDALE EWES.

FIG. 1.—DARTMOOR RAM.

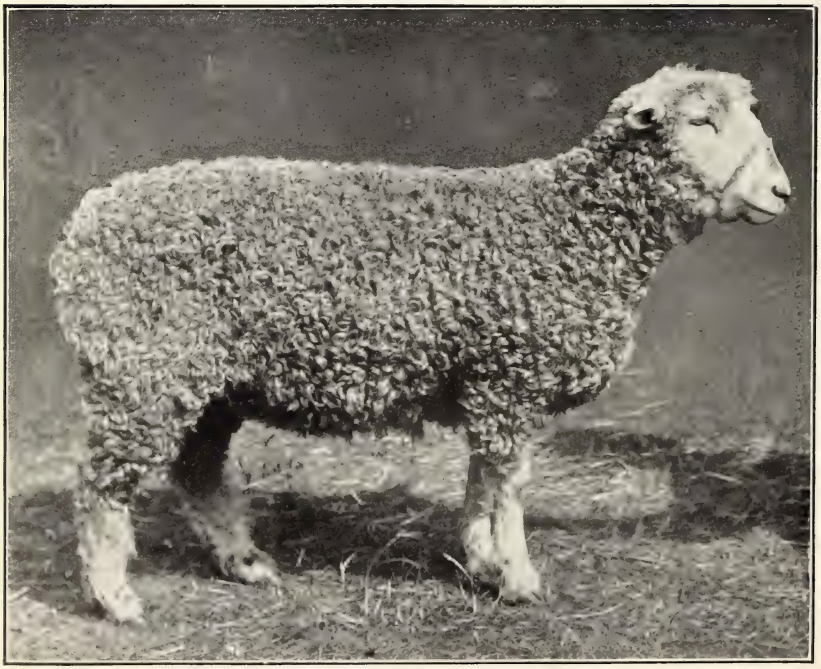


FIG. 2.—DARTMOOR EWE.

extra long staple being produced that sells for as much as $1 a pound. However, the amount of this trade is limited.

In early maturity and fecundity the Lincoln is similar to the other long-wool breeds. None of them have these qualities developed as strongly as the Down breeds. The ewes give a fair amount of milk.

The Lincoln Longwool Sheep Breeders' Association of England was organized in 1892. The National American Lincoln Sheep Breeders' Association was founded at Lansing, Mich., in 1891. They have registered up to January 1, 1914, 26,122 head, and the secretary is now located at Charlotte, Mich. The following standard and scale of points has been adopted:

STANDARD AND SCALE OF POINTS OF LINCOLN SHEEP.

	Points.
Constitution: Body deep, back wide and straight; wide and full in the thigh; bright, large eyes; skin soft and of a pink color	25
Size: Matured rams not less than 250 pounds when in good condition; matured ewes not less than 200 pounds	10
Appearance: Good carriage and symmetry of form	10
Body: Well proportioned, good bone and length; broad hind quarters; legs standing well apart; breast wide and deep	15
Head: Should be covered with wool to the ears; tuft on forehead; eyes expressive; ears fair length; dotted or mottled in color	10
Neck: Medium length; good muscle; well set on body	5
Legs: Broad and set well apart; good shape; color white, but some black spots do not disqualify; wooled to the knees	10
Fleece: Of even length and quality over body; not less than 8 inches long for 1 year's growth	10
Quality of wool: Rather fine, long wool; strong, lustrous fiber; no tendency to cot.	5
Total	100

THE KENT, OR ROMNEY MARSH.

The Romney Marsh sheep originated in the low-lying tract of land bearing the same name in the county of Kent, in southeastern England. The marsh is about 14 miles long and 10 miles broad. It is a low, level, alluvial plain, and high tide at one time covered it, but since then the sea has been held back by embankments. The exact age of the old-type Romney is unknown, but it is supposed that they roamed the marsh for at least several centuries.

Like all other ancient breeds, the prototype of the modern Romney lacked mutton form, symmetry, and quality. They were, however, very hardy and produced a heavy fleece of long wool. They were good grazers and rarely received any feed other than pasture throughout the year.

The infusion of Leicester blood, that probably took place, as in all the longwool breeds, was not very successful in the Romneys, especially where the proportion of the foreign blood was at all large. While it improved the form, the quality, and the early-maturing

characteristics, it also reduced the size, the weight of fleece, the constitution, and their ability to rustle for themselves. This being the case, the breeders later used the Leicester for a type and approached its desirable qualities as nearly as possible through selection within the breed itself.

The Romneys are still the favorite sheep in their native marsh. They subsist here without artificial feeding throughout their second winter. From this native habitat they have gradually spread over the county of Kent, and flocks are also to be found in Sussex, Herts, and Rutlandshire.

They have been exported in increasing numbers since the establishment of the English breed association in 1895, and are especially popular in New Zealand and Argentina.

F. W. Harding imported for William Riddell & Sons in 1904 four ewes and one ram of this breed from England. They were exhibited at the St. Louis Exposition, but did not make a very favorable impression. Eleven ewes and one ram were imported in 1909 for the same firm from New Zealand. Those from New Zealand were smaller, had more quality, and were better shearers than the English. The same year Mr. A. T. Hickman, of Egerton, Kent, exported 32 head of rams to America, which were sold during the International Live Stock Exposition of that year. They realized an average of only $24.125 per head, a rather low price when $1,500 has been realized for a single ram in England.

As to adaptability of this breed to this country, much is yet to be determined. Where they have been crossed upon fine wools they have given large, strong lambs, and the promoters are high in their praise of this breed. It is claimed that Romney lambs are larger at birth than those of any other sheep. It seems altogether probable that the breed will take a prominent place among the other long wools of this country and enrich our live-stock industry by so doing.

Three ewes and one ram were also imported for the Wyoming Experiment Station in the fall of 1906, and they seem to have made a favorable impression, both the purebreds and the crosses that have been produced.

The breed is white-faced and hornless and unusually hardy. Rams should weigh from 200 to 225 pounds and ewes from 175 to 200 pounds. The mutton is the best of the long-wool breeds, ranking next to the Downs, and it enters prominently into the frozen-carcass trade of New Zealand and Argentina. The fleece is long and dense and has some of the characteristics of the medium wools, the ringlets characteristic of long wools being not as much in evidence. The foretop may be either present or absent. Fleeces should weigh from 12 to 16 pounds. The wool ordinarily grades a low quarter blood combing.

The fecundity of the breed is ordinary, a lamb to a ewe being considered a good average.

The breed is criticized in England for lacking fixity of type and for being prominent in the backbone and shoulders. Hardly enough specimens have come to this country to enable one to criticize them justly.

The Kent, or Romney Marsh, Sheep Breeders' Association of England was founded in 1895, and it has done much to advance the interests of the breed. The New Zealand Romney Marsh Sheep Breeders' Association was organized about the same time. The Romney Sheep Breeders' Association of America was organized December 5, 1911, at Chicago. Up to January 1, 1914, they have registered 124 head of sheep. The association has been very active in advancing the breed in every possible way, and a number of other importations have resulted from their endeavors. The offices are at Mechanicsburg, Ohio.

THE WENSLEYDALE.

The Wensleydale is the modern form of the old Teeswater breed. In some parts of their native country, notably North Lancashire, they are still known by the latter name. They were also locally known by the name of "Mugs" until 1876, since which time they have borne their present name. It is said that these sheep were used by Bakewell in developing the Leicester, and there is considerable similarity between the two breeds. However, this likeness may be due to the Leicester blood that was subsequently introduced into the Wensleydale. Mr. R. Outwaite, of Appleton, the "Patriarch of the Wensleydales," used a large Leicester ram, a son of which was the sire of the famous ram "Blue Cap," shown at the Liverpool Royal in 1841. Mr. Outwaite refused 100 guineas for this famous sire. To him and to his sons can be traced most of the leading characteristics of the modern Wensleydale. The Leicester rams imparted early maturity, smaller, more compact carcasses, better quality of mutton, and a finer, denser fleece to the old breed. The present location of the breed is in north and northwest Yorkshire, Cumberland, and Westmoreland Counties.

In July, 1906, F. H. Neal, of Lucan, Ontario, Canada, imported three yearling ewes and one ram of the Wensleydale breed for the Wyoming Experiment Station. These did not prove popular, being too leggy and having open fleeces, and when crossed upon other breeds did not give flattering results. It is possible that the poor showing made was due to the fact that those imported were not good specimens.

The Wensleydale is a large, high-standing, hornless, long-wool breed, very active and hardy. The face and legs, and the entire skin to a less degree, are blue. This color is preferable because dark-faced lambs are desired when this breed is crossed upon the Black-faced Highland. These lambs are known as "crosses," or "Mashams," in Britain. The mutton is of good quality, the fleece is long and open, the locks falling in close ringlets, and the fiber is of good quality. They are said to be quite fertile and to make good mothers.

In England there are rival breed associations. Both of these associations were founded about 1890. One was known as the Pure Select Wensleydale Sheep Breeders' Association, but changed its name later to the Incorporated Wensleydale Sheep Breeders' Association. This society holds its annual fair at Hillifield. The other is called the Wensleydale Longwool Sheep Breeders' Association, and this society's fair is held at Northallerton. The scale of points of the latter English Society will be given, as there is no American society.

SCALE OF POINTS FOR WENSLEYDALE RAMS.

	Points.
Head: Face dark; ears dark and well set on; head broad and flat between ears; muzzle strong in rams; a tuft of wool on forehead; eyes bright and full; head gaily carried	15
Neck: Moderate length, strong, and well set on to the shoulders	10
Shoulder: Broad and oblique	5
Chest: Deep and wide	10
Wool: Bright luster; curled all over body; all alike in staple	20
Back and loins: Ribs well sprung and deep; loins broad and covered with meat; tail broad; flank full	25
Legs and feet: Straight and a little fine wool below the hock; fore legs well set apart; hind legs well filled with mutton	15
Total	100

THE DARTMOOR.

On either side of the Dartmoor in Devonshire a type of sheep has developed that is designated as the Dartmoor breed. Some claim that the foundation stock of this breed was the same as that of the Exmoor, and this theory is as plausible as any, but for at least three generations the breed has been distinct from the Exmoor in that they are considerably larger and produce heavier, longer fleeces in which the staples are more distinct.

Like the other long-wool breeds, the Dartmoor was considerably improved years ago by the Leicester, Lincoln blood also being introduced about this time.

The breed has never been very widely distributed, but they have proven an excellent sheep in their native moor. Their extreme hardiness enables them to withstand the rigors of the winters of the Dart-

moor, principally upon grass, but sometimes supplemented with a little hay. They can withstand a very wet climate. Only the show sheep receive grain or roots.

Wrightson says, "The Dartmoor sheep of to-day are a large, long-wooled variety, rivaling in size the Cotswold, Lincoln, or Romney Marsh breeds." With the exception of their hardiness they have largely lost the characteristics of a mountain breed. They are preferably hornless, but the rams occasionally have short horns, about 2 inches long and extending backward from the head. The face is gray, with black spots frequently about the muzzle and on the ears. Dun spots are objectionable. The wool is long, sometimes reaching a length of 15 inches in 12 months, of excellent quality, and very strong. It extends over the polls and well down over the hocks and knees, and a little appears upon the hind legs. Fleeces should weigh about 15 pounds.

The ewes are excellent mothers and produce early lambs when removed to more favorable climates, but few fat lambs are produced in the Dartmoor.

Wm. Cooper & Nephews imported 58 head of Dartmoors in 1909 for John Rawlins, of Forest, Ontario. Soon afterwards these sheep were sold and taken to Utah and Wyoming. They greatly resemble a gray-faced Cotswold and are of about the same size as that breed. They are characteristically ewe-necked. The fleece is of exceptional length and quality, and the ringlets are close and distinct. The Dartmoor has been used for the production of extra long wool to a limited extent, and they seem especially suitable for this purpose.

However, too few of this breed have been imported and not enough trials have been made to warrant any extended discussion as to their general fitness to American conditions.

BLACK-FACED HIGHLAND.

The Black-faced Highland is much famed in poetry and legend, and there are many explanations as to its origin. Among these are that the original stock was cast ashore from the Spanish Armada, an already overworked theory, and that they are the result of a cross between a sheep and a goat, something which has never been proved to exist, and from present knowledge seems impossible. Other theories are that they came from the mountainous part of England to Perth and Dumbarton, and that the original flock was placed upon the estate of King James IV, in Ettrick Forest, about 1503. Either of these latter two theories is at least possible. At any rate, these black-faced sheep have been well known for a century and a half, and the dispute as to their origin would indicate that they had ranged the Highlands for a still longer period.

After the establishment of the breed in Perth and Dumbarton, they colonized the neighboring counties and eventually spread over the Highlands of Scotland and much of the mountainous region of England. About a century ago, the Black-face was forced to retreat before the Cheviot, but it later reestablished itself, because of its greater hardiness. These two breeds practically comprise the sheep sections of the Scotch shows. David Dun, of Kirkton, greatly improved the breed, and he has been referred to as the Scotch Bakewell.

Cross-bred or grade Black-faced Highland sheep meet with much favor in Scotland. Crossing a Leicester ram upon the ewes produces what is known as a "cross" or "mule"; a Cheviot ram upon Black-faced ewes produces a "half-long."

Hugh Brodie, in June, 1861, made an importation of one ram and two ewes to New York Mills, N. Y. In 1867 Isaac Stickney made an importation into Illinois. They have not been especially popular, and consequently their distribution is quite limited. The New York State Fair is the only show in this country where these sheep are exhibited.

The breed would probably succeed in some of the mountainous parts of this country and also in Alaska, as they thrive excellently upon coarse pasture, but upon the more fertile, arable districts they are out of place and will not yield returns comparable to those of the breeds adapted to the latter conditions. They are a very picturesque breed and are suitable for keeping in parks, and have been used for this purpose to a certain extent.

The Black-faced Highland is the hardiest of all British breeds of sheep. They are small and very active, but not so restless as the Welsh Mountain sheep. Their faces and legs are generally free from wool and covered with black or black and white hair. They usually have a small amount of wool about the top of their heads. When mottled, the markings are always very distinct. The form is rather inferior because of their habits of life, but the mutton is of the highest quality. Rams and ewes in breeding condition should average about 150 pounds and 125 pounds, respectively.

The fleece is of very low quality, lacking fineness, luster, and uniformity. It usually contains considerable hair and kemp and is classed as carpet wool when sold upon our markets. The staple is usually quite long, occasionally attaining a length of 15 inches. Both sexes are horned, and it is sometimes necessary to cut off part of the horns to prevent their growing into the head and to allow them to eat, otherwise they could not get their heads upon the ground.

The ewes are good mothers and fair milkers, and the lambs are very strong at birth. These sheep show a marked fondness for their homes. It is claimed that they have traveled 60 miles and swam rivers to return to their native haunts.

FIG. 1.—BLACK-FACED HIGHLAND RAM.

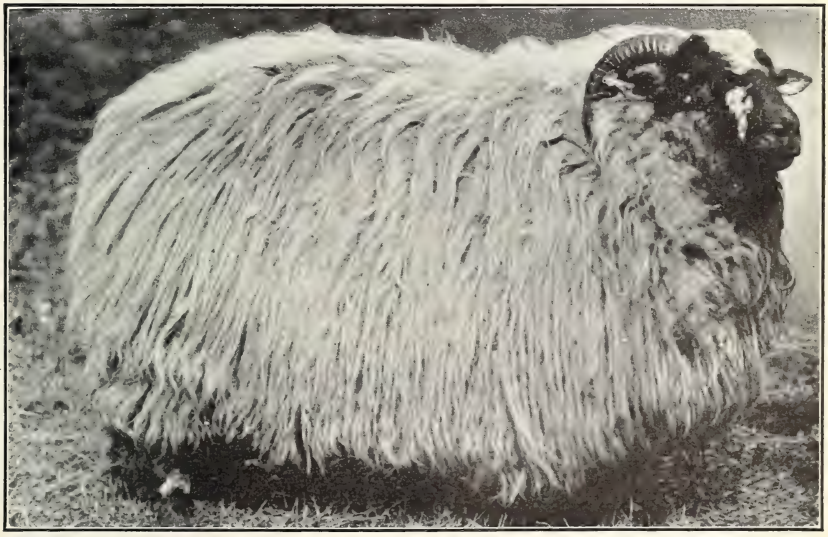


FIG. 2.—BLACK-FACED HIGHLAND EWE.

FIG. 1.—KARAKULE RAM.

FIG. 2.—KARAKULE EWE AND LAMB.

FIG. 1.—PERSIAN RAM.

FIG. 2.—PERSIAN EWE AND LAMB.

FIG. 1.—BARBADOS RAM.

FIG. 2.—BARBADOS EWE.

If Black-faced ewes are fed heavily when they are with lamb, there is danger of growth of the horns of the male lambs to such an extent that death may result to both ewe and lamb.

A meeting of the breeders of Black-faced Highland sheep was held January 31, 1907, at New York City, and the American Black-faced Highland Sheep Association was formed. This organization looks after the breed in America.

THE KARAKULE OR ARABI.

The Karakule sheep has sprung into prominence because of the increase in demand for Persian lambskins. The Persian lambskin is known by such other trade names as krimmer, astrachan, and broadtail, these different terms representing somewhat different grades, and is the product of the Karakule or Arabi lamb. This demand has increased immensely during the last 15 years, one New York house alone importing from 200,000 to 250,000 skins per year.

These skins are practically all imported from Bokhara and the neighboring districts of Russian Turkestan. The large foreign demand for skins has caused a great deal of crossing, this having been practiced to such an extent as to threaten the existence of the breed. A well-known authority on this sheep made the statement that there were not more than 5,000 purebred Karakules in existence, and that these were mostly to be found upon the estates of the Bokharan noblemen.

There has been a law passed forbidding the exportation of Karakules from their native country, and this is rigorously enforced. This edict is said to have been passed for religious reasons, but the desire to keep a monopoly upon the fur industry was probably also a reason for its enactment.

The Karakules are one of the fat-tail breeds. The caudal appendage is broad, flat, and tapering toward the end. The lower vertebræ are curled and twisted to such an extent that they resemble a corkscrew, and the entire appendage is used primarily as a storehouse for fat.

The head is strikingly characteristic of the breed, the face being narrow and the top and fore part of the skull much rounded. The rams ordinarily have beautiful outspreading spiral horns, but the ewes are generally hornless. The ears are small and pendulous, especially so in the lambs. The face and legs of the adults are covered with short, lustrous black hair, while the wool of the body is coarse, long, and varies in color from gray to black. Very hard outer wool and the absence of soft underwool are said to be indications of purity of blood.

The breed is noted for its extreme hardiness, and it is able to exist and thrive under very adverse conditions. In Bokhara the sheep

are kept entirely in the mountains during the summer and until snow flies; then they are driven to the lowlands, where they are wintered.

The mutton is said to be the most palatable of any breed, and the fat is also considered a delicacy by the Bokharans, being used by them instead of butter.

The lambs when dropped are strong and active, usually jet black. The wool has a high luster and should be closely curled over the entire body, down the legs, and well over the head. Occasionally golden-brown lambs are dropped, the color of the prophet Mohammed. These are said to be especially highly valued by certain tribes and to have exalted the Karakule to its sacred position. Intermixed gray hairs among the black also rarely occur, producing a skin resembling somewhat the Siberian silver fox.

When used for producing fur, the lambs must be killed when not older than 10 days, as the curls open after this period. Formerly the skin of the unborn lamb was used, necessitating the killing of both the ewe and the lamb, but this practice no longer prevails. After the lambs are killed the ewes are milked for a time, and the famous Brinza cheese is made from the product. The value of superior skins ranges from $10 to $15.

The first Karakules to come to America were those brought over by Dr. C. C. Young, of Belen, Tex., in December, 1908. This shipment originally consisted of 15 head—3 bucks and 12 ewes. Seven lambs were born during the journey. Another importation was made by the same person in November, 1912, consisting of 19 head—13 bucks and 6 ewes. One buck died in quarantine and 5 lambs were born, making a total of 23 head.

A number of flocks have been established in this country from this stock, in Texas, New Mexico, and Kansas, and recently a flock has been taken to Prince Edward Island. The Department of Agriculture used two of these rams for experimental purposes, crossing them upon ewes of the American Merino, Barbados, Cotswold, and Cheviot breeds. Half-blood skins were produced, but they were of poor quality. The crossing upon the Merino and Cheviot breeds has helped to establish the fact that the tight-wool breeds are unsuited for the production of fur.

With the Barbados cross there still seems to be possibilities. The second cross, resulting in a three-quarter blood Karakule lamb, shows considerable improvement, and if the high fecundity of the Barbados can be maintained in the higher crosses it may be that this work will prove valuable in increasing the amount of Karakule breeding stock.

Of the long-wool crosses with the Karakule, the Lincoln has given the best results.

The Karakule has been tried in Texas, Kansas, Maryland, and a number of other places in America, and in every instance has proven extremely hardy. There is no doubt but that the breed will thrive in

our climate, and from the results that have already been obtained in fur production it seems quite likely that the industry will be more permanently established in America.

THE PERSIAN SHEEP.

The first importation of Persians to the United States took place in June, 1892. Truxton Beale, United States minister to Persia, brought over six individuals, which he presented to Secretary of Agriculture Rusk. After changing hands several times, they were finally taken to C. P. Bailey's ranch, at San Jose, Cal. A number of small colonies were disseminated from the parent flock through various Western States, and they were used for crossing upon the fine-wool range sheep, producing what is known as the Persiarino. The cross was said to result in an improvement in mutton form and for a time was popular in a limited way, but less is heard of it during late years. Another importation was made in 1910, consisting of a buck and two ewes.

The Persians that have arrived upon our shores have varied considerably in color. Some have dark faces, while others are mostly white. The mutton is considered of good quality, and the tail is a delicacy with the Turks, but it is not very highly appreciated by the Americans. The wool is rather long and coarse and grades low quarter blood combing or carpet wool.

It has been claimed that the Persian lambskin industry is based upon this breed, but present information shows that the so-called Persian lamb does not come from Persia but from Bokhara and that the young of the Karakule sheep, mentioned elsewhere in this publication, produce these skins.

In 1904, just previous to the Louisiana Purchase Exposition, the breeders of Persian sheep in America are said to have organized a society for the promotion of the breed. They have not manifested very much activity of late, the society apparently having ceased to exist.

THE BARBADOS.

The Barbados, or "Woolless," sheep were imported by the United States Department of Agriculture from the Island of Barbados, West Indies, in 1904. This importation consisted of one ram and four ewes, and represented a present to the Department. The original stock is supposed to have come from Africa. They are a rather small breed, 52 ewes at the Government Farm at Beltsville, Md., ranging from 63 to 115 pounds in weight and averaging 85.4 pounds. Bucks weigh from 125 to 150 pounds.

In mutton qualities, these sheep are very deficient. They are narrow and upstanding, fairly fine in bone, but have very long necks. They are much cut up in the flanks, deficient in heart girth, have a very droopy rump, with a low setting of the tail, are deficient in the

twist, and have poor development of the hind quarters. They are lacking in covering, not only over the ribs, but generally throughout the body, the bony framework being quite prominent.

They are covered with hair, varying in length from one-fourth inch to 2 inches. This is usually longer upon the top of the shoulders and neck, and it is more or less crimped. This coat of hair usually obscures the small amount of wool, which is short and very fine, but occasionally the wool projects out through the hair. During the spring and early summer the wool loosens and gradually curls up through the hair and is shed in tufts.

The head is rather attractive and is light or dark brown, with characteristic black bars above and below or alongside the eyes. The inside of the ears is black. The back and sides vary from a light fawn to a sealskin brown, and rarely there are markings of white. The belly and inside of the legs are black. The rest of the body varies in color from a light to a dark brown. Infrequently white spots occur.

The rams have a beard and also have long hair along the spine and extending from the lower jaw down along the brisket. They are usually hornless, but short horns occur occasionally. The redeeming features of the Barbados are their breeding qualities and their hardiness. Ewes breed at any season of the year and are remarkably prolific. One ewe produced six lambs at one time, although they all did not live, and twins and triplets are more common than singles. They are especially good milkers and the milk is very rich. The Government is crossing these sheep upon some of the mutton breeds for the purpose of determining the degree to which the fecundity is inherited in the cross-bred sheep and whether or not this quality can be utilized. These sheep have also been crossed with the Karakule for the production of lambskins, but the first cross has produced unsatisfactory results from the fur standpoint.

THE BARBARY SHEEP, OR AOUDAD.

The Barbary sheep have no commercial value. They are a wild breed; both sexes are horned, and the horns are beautifully banded and are marvels of symmetry. They are commonly seen in the zoological gardens and have been brought over to this country for a great many years for exhibition purposes. They have no wool, but are covered with light-brown hair. The bucks have a decided beard which extends well down their forelegs. Mature males weigh about 200 pounds and ewes from 125 to 150 pounds. The breed is quite prolific, one ewe at the Washington Zoo dropping four lambs in 11 months. They are very active and suspicious, especially with strangers.

APPENDIX.

Table showing the probable origin of the breeds of sheep in America.

American Merino	Spanish Merino.
Rambouillet	Spanish Merino.
Southdown	Sussex.
Shropshire	Morfe Common.
	Southdown.
	Cotswold.
	Leicester.
Hampshire	Wiltshire Knots.
	Berkshire Knots.
	Southdown.
	Cotswold.
Oxford	Cotswold.
	Hampshire.
	Southdown.
Dorset Horn	Old Dorset.
	Somerset.
Suffolk	Norfolk.
	Southdown.
	Hampshire (?).
Cheviot	Old Cheviot.
	Lincolnshire.
	Leicester.
Welsh Mountain	(?)
Exmoor Horn	Old Exmoor.
	Leicester.
Lonk	Penistone (?).
	Black Faced (?).
Ryeland	(?)
Kerry Hill	Native Sheep.
	Clun Forest.
	Shropshire (?)
Tunis (American type)	Tunis.
	Southdown.
Leicester	Old Leicester.
	Teeswater.
Cotswold	Old Cotswold.
	Leicester.
Lincoln	Old Lincoln.
	Leicester.
B. Leicester	Leicester.
	Cheviot (?).
Romney Marsh	Old Romney.
	Leicester.
Wensleydale	Teeswater.
	Leicester.
Dartmoor	Old Dartmoor.
	Lincoln.
	Leicester.

Breeding of grand champions, reserve champions, and winners in the carcass contests at the International Live Stock Exposition, Chicago.

Year.	Grand champion.	Reserve champion.
1903	Grade Shropshire.	
1904	Grade Shropshire.	
1905	Southdown.	
1906	Southdown.	Grade Lincoln.
1907	Southdown.	Hampshire.
1908	Grade Shropshire.	Southdown.
1909	Southdown.	Hampshire.
1910	Southdown.	Hampshire.
1911	Shropshire-Leicester.	Shropshire.
1912	Shropshire.	Oxford.
1913	Shropshire-Leicester.	Oxford.

Breeding of grand champions, reserve champions, and winners in the carcass contests at the International Live Stock Exposition, Chicago—Continued.

WINNERS IN CARCASS CONTESTS.

Year.	Prize.	Wethers.	Wether lambs.
1900	1	Southdown-Shropshire.	Oxford.
	2	Oxford.	Southdown-Dorset.
	3	Shropshire.	Shropshire-Dorset.
1901	1	Grade Shropshire.	Southdown.
	2	Southdown (?).	
	3	Cotswold.	
1902	1	Grade Hampshire.	Grade Southdown.
	2	Grade Southdown.	Grade Shropshire.
	3	Grade Southdown.	Grade Southdown.
1903	1	Suffolk.	Grade Hampshire.
	2	Grade Shropshire.	Oxford.
	3	Southdown.	Grade Southdown.
1904	1		Grade Southdown (?).
	2		Southdown.
	3	Grade Southdown (?).	Grade Shropshire.
1905	1	Oxford-Southdown.	Grade Shropshire.
	2	Hampshire.	Grade Shropshire.
	3	Cheviot.	Grade Shropshire.
1906	1	Southdown.	Southdown.
	2	Southdown.	Grade Shropshire.
	3	Cheviot.	Dorset.
1907	1	Southdown.	Southdown.
	2	Southdown.	Hampshire-Rambouillet.
	3	Grade Southdown.	Grade Southdown.
1908	1	Shropshire.	Southdown.
	2	Shropshire.	Southdown.
	3	Southdown.	Shropshire.
1909	1	Southdown.	Southdown.
	2	Southdown.	Southdown.
	3	Southdown.	Grade Southdown.
1910	1	Southdown.	Cheviot.
	2	Grade Southdown.	Southdown.
	3	Southdown-Shropshire.	Southdown.
1911	1	Southdown.	Southdown.
	2	Cheviot.	Southdown.
	3	Grade Southdown.	Southdown.
1912	1	Southdown.	Southdown.
	2	Southdown.	Southdown.
	3	Cheviot.	Grade Shropshire.
1913	1	Southdown.	Southdown.
	2	Southdown.	Southdown.
	3	Southdown.	Southdown.

Table of information upon the breeds of sheep.

[F=fine wool; M=medium wool; C=coarse wool; W=woolless.]

Breed.	Rams.	Ewes.	Color of face.	Grade of wool.	Number recorded Jan. 1, 1913.	Class at the Royal, England.
Merino A type...F..	Horned.	Polled..	White.....	Fine clothing.....	.....	.....
Merino B type...F..	...do....	...do....	.....do.....	.....do.....	.....	.....
Merino C type...F..	...do....	...do....	.....do.....	Fine combing.....	.....	.....
Rambouillet.....F..	...do....	...do....	.....do.....	Fine clothing and combing.	[1] 500 [2] 73,305	.....
Southdown.....M..	Polled..	...do....	Gray.....	½-blood combing or clothing; ⅜-blood combing or clothing.	30,645	1839
Shropshire.....M..	...do....	...do....	Soft black.....	⅜-blood combing; ⅝-blood clothing.	385,411	1860
Hampshire.....M..	...do....	...do....	Black.....	⅜-blood combing; ¼-blood combing.	49,640	1862
Oxford.....M..	...do....	...do....	Brown.....	¼-blood combing; braid..	67,280	.....
Dorset Horn....M..	Horned.	...do....	White.....	⅜-blood combing; ¼-blood combing.	15,030	1862
Suffolk.....M..	Polled..	...do....	Black.....	¼-blood combing; ⅝-blood combing.	2,264	1880
Cheviot.....M..	...do....	...do....	White.....	¼-blood combing.....	8,115	1871
Tunis.....M..	...do....	...do....	Mottled.....	⅜-blood combing; ½-blood combing.	2,530	.....
WelshMountain.M..	Horned.	...do....	Slightly tanned or speckled.	¼-blood combing.....	.....	1885
Exmoor Horn...M..	...do....	Horned.	White.....	.....do.....	.....	.....
Ryeland.....M..	Polled..	Polled..	.....do.....	.....do.....	.....	1870
Kerry Hill.....M..	...do....	...do....	Mottled.....	.....do.....	.....	1907
Lonk.....M..	Horned.	Horned.	.....do.....	Low ½-blood combing...	.....	1877
Shetland.....M..	Either..	Either..	Black, white, or both.	Probably ½-blood combing.	.....	.....
Leicester.....C..	Polled..	Polled..	White.....	Braid and low ¼-blood..	15,913	1839
Cotswold.....C..	...do....	...do....	Light gray or speckled.	.....do.....	74,455	1862
Lincoln.....C..	...do....	...do....	White, slightly speckled.	.....do.....	26,122	1862
Romney Marsh..C..	...do....	...do....	White.....	Low, ¼-blood combing...	124	1862
Wensleydale.....C..	...do....	...do....	Bluish white....	Braid.....	.....	1883
Dartmoor.....C..	...do....	...do....	Speckled black and white.	.....do.....	.....	1875
Black-faced Highland, C.	Horned.	Horned.	Mottled, black and white.	Low, ¼-blood combing and carpet wool.	.....	1872
Karakule.....C..	...do....	Polled..	Black.....	.....do.....	.....	.....
Persian.....C..	...do....	...do....	Mottled or dark.	.....do.....	.....	.....
Barbados.....W..	Either..	...do....	Black and fawn.	.....	.....	.....
Barbary.....W..	Horned.	Horned.	Brown.....	.....	.....	.....

[1] Von Homeyer Association. [2] American Association.

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